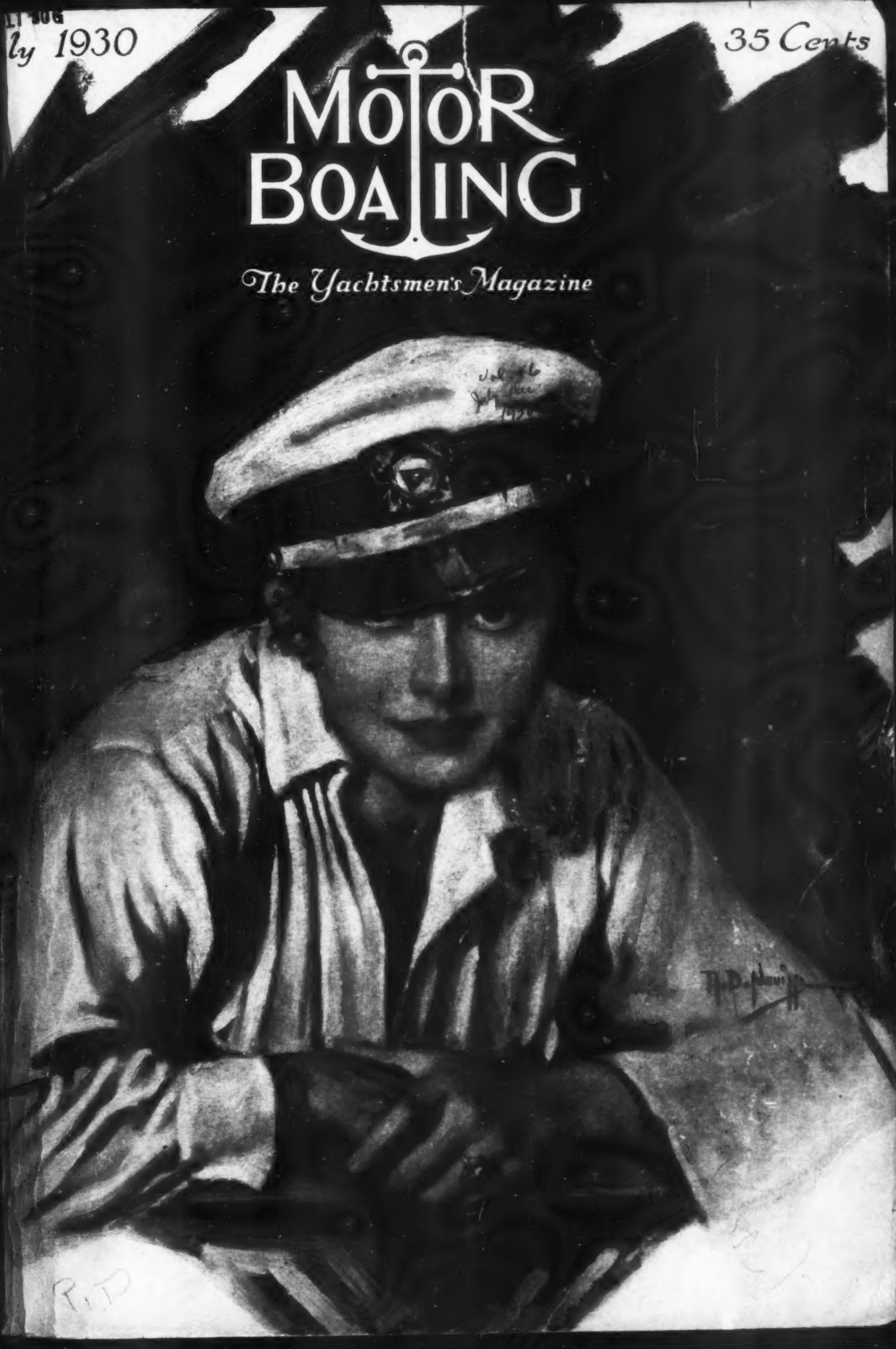
ly 1930

35 Cents

MOTOR BOATING

The Yachtsmen's Magazine



Vol. 46
July Dec
1930

R. I. D

FLYING WATER

needn't menace *Your* ignition!

LOOK down into your engine compartment. That sturdy power unit must work in humidity, in mist, even in spray—yet a single drop of water can cripple it by wetting a spark plug; a splash can stop it dead!

Waterproof your engine by installing G-E *Lacquered* Ignition Cable with Textolite Caps to cover every terminal snugly. Then full spark energy reaches the plugs.

Those little cables carry electricity at *thousands of volts* pressure for hottest, quickest sparks. The strain is terrific. Ordinary wire soon permits current to leak into the air . . . to short-circuit in moisture, leaving your engine spark-starved.

General Electric's vast experience in the transmission and control of electricity has produced G-E *Lacquered* Ignition Cable and Textolite Caps to *prevent* those leaks. Thick, flexible lacquer guards the cable against blistering engine heat, weather, fumes, oil, abuse.

You can put new life into your engine... at little cost.

Use the coupon!

G-E Lacquered Ignition Cable and Textolite Caps protect your engine against power losses —at little cost.

GENERAL ELECTRIC

MERCHANDISE PRODUCTS

MERCHANDISE DEPARTMENT · GENERAL ELECTRIC COMPANY · BRIDGEPORT, CONNECTICUT

Section A-537, Merchandise Department,
General Electric Co., Bridgeport, Conn.
Please tell me about G-E Lacquered Ignition Cable and Textolite Caps.

Name..

Address..

Looks Like a Costly Inboard

Electric-Starting 25 m. p. h. Outboard Aquaflyer Runabout

Tilting Propeller escapes obstructions—makes shoal and shallow waters navigable

PRICE no longer governs what you can expect in speed, performance, and luxury.

For complete outboard motor boats that start and steer like motor cars are offered by Johnson in rakish, streamline hulls, and colors as smart as sports cars.

First among this fleet are Johnson Aquaflyers, powered by speed champion Sea-Horse motors, concealed and silenced in a stern hatch. Full tilting propellers pass safely over rocks, shoals, and floating hazards that disable other types of propeller and drive shaft installations. They also permit you to beach your boat.

Having no engine within the boat, sports clothes are not exposed to grease, and a 20-ft. Aquaflyer has as much usable space as a 26-ft. inboard.

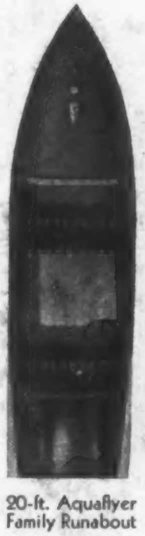
In the 17½-ft. Aquaflyer and Johnson's smaller Matched Units for yacht tenders, utility and pleasure, is introduced revolutionary boat construction—seamless and watertight, called Sealite—non-absorbing, 50% lighter in service, requiring no care in storage or use, and 35% stronger.

Write for Color Catalog and Prices

See the 7 exclusive advantages, including non-stall Electric-starting, quiet Water-cooled Underwater Exhaust, and Release Charger for easy starting. Write today. Partial payments. All prices f. o. b. factory.

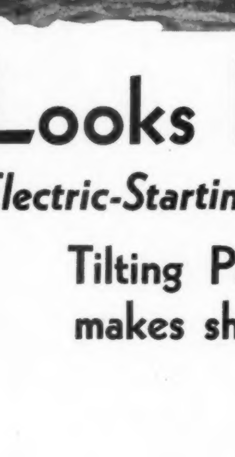
All dealers carry first-aid service parts. Sales and service stations in all parts of the country.

JOHNSON MOTOR COMPANY, 3010 Pershing Road, at the Lake, Waukegan, Illinois. *In Canada:* Canadian Johnson Motor Co., Ltd., Peterboro, Ontario . . . *World's Largest Manufacturer of Outboard Motors and Matched Units*



20-ft. Aquaflyer Family Runabout

Prestite ⅛-in. Philippine mahogany (Bataan) construction; round bilge bottom. Complete with electric-starting "32"—$1065. Photograph at top, 17½-ft. Aquaflyer complete with Electric-starting Sea-Horse "32," $995



Electric-starting Sea-Horse "32"

The 4-cylinder monarch of Outboards, illustrated at the right.

Sea-Horse "Single"—only 27 lbs. Full Pivot steered $125. Others up to $395.

JOHNSON SEA-HORSES *Matched* UNITS & BOATS

MoToR BoatinG, July, 1930. Volume XLVI, No. 1. Published monthly at 57th Street at Eighth Avenue, New York, U. S. A., by International Magazine Co., Inc. Yearly subscription price: United States, $3.00; Canada, $3.00; Foreign. $4.00. Entered as second-class matter April 15, 1925, at the Post Office at New York, under the act of March 3, 1879. (Printed in U. S. A.)

A SMOKE STACK black that *stays* black . . . and stays on . . . regardless of wind, weather and temperature! That's Edward Smith Smoke Stack Black . . . backed by 103 years of knowing how to combine first grade materials and produce top notch paints and varnishes. Made in buff, too—and it *stays* buff. Insist upon Edward Smith Smoke Stack Finish . . . use it wherever there is hot metal to protect and beautify. Then watch your stacks stand out smartly from the neighboring ones . . . unless they, too, are painted with Edward Smith! Also makers of deck buff, aquatite spar, spar coating, bottom green. Write for literature and color cards.

SMITH
SMOKE STACK
BLACK
1 GALLON
E.S.
1827
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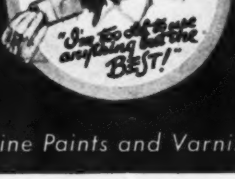
DWARD SMI
COMPANY

WE never expect every owner of a fine boat to use Edward Smith Paints and Varnishes . . . although it is significant that each year sees more and more such owners turning to these time-tested materials on the testimony of those who have learned their value thru actual use.

EDWARD SMITH & COMPANY

LONG ISLAND CITY
NEW YORK


"I'm too old to use anything but the BEST!"

Makers of Marine Paints and Varnishes since 1827

and now

Dee Wite

specifies

DUPLEX MARINE ENGINE OIL

Gray-powered Dee-Wite, driven by Jack Prosser and lubricated with *Duplex Grade S* winning the Albany-New York (inboard) race, April, 1930, defeating 14 competitors. This was the only Dee-Wite entered.

ENTERPRISE OIL CO., INC.
Established 1884
BUFFALO, N. Y.

Dee Wite
division of
Dwight Lumber Company
ESTABLISHED 1856
Detroit, Michigan

March 17, 1930.

Enterprise Oil Co.,
164 Chandler Street,
Buffalo, New York.

Gentlemen:

We are in receipt of your letter requesting a frank statement as to our opinion of Duplex Marine Engine Oil.

Complying is a pleasure because we know Duplex has done a great deal to improve marine engine operation. This is why every Dee Wite boat carries a can of Duplex as initial equipment, and why we place an instruction plate on every boat recommending the use of your oil.

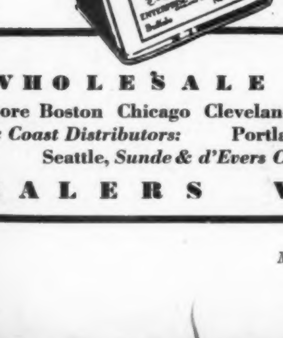
Dee Wite boats are built to give maximum speed and long life. Maintenance of speed is obviously dependent upon engine efficiency. Duplex maintains that efficiency, and hence the Duplex lubricated boat is a satisfactory one. We want our owners to have satisfaction - therefore, we recommend the use of Duplex Marine Engine Oil.

This is the public statement requested. You may use it in any way you see fit. It is a simple statement of our reasons for the use of Duplex Marine Engine Oil, and we take pleasure in adding that we have as great confidence in your organization as we have in your product.

Yours very truly,
DWIGHT LUMBER COMPANY
BOAT DIVISION

Joseph B Lodge

JBL
Vice-Pres. & General Mgr.



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DEALERS WHEREVER BOATS FLOAT

"She"
Needs Dependable Instruments

NATURALLY and without premeditation, every old salt always refers to a ship as "she." For what could be more companionable, more temperamental — or a greater source of pride?

Centuries ago the first marine instruments were invented because every sailor knew that in dealing with boats, common sense was not enough.

Your modern motor boat is no exception. Quite to the contrary. She is the finest of aquatic mechanisms. By her very nature she responds most readily to the best marine instruments that money can buy.

Through Pioneer Marine Instruments she most easily indicates her high spirits, confides her complex moods, or reminds you of a low fuel, water, or oil supply.

And Pioneer Marine Instruments will help you to keep her on her course, to reach port safely in thick weather, to protect her from unnecessary exposure to storms.

Pioneer Instrument Boards help you to dress her up, and arrange the instruments so they are convenient and easy to read. A boat has a way of appreciating these little attentions.

So if you would get the most out of life on the water, install Pioneer Marine Equipment. Your dealer can supply you.

Pioneer Marine Instruments include:

Engine Instruments

Fuel Flow Meter .... Fuel Level Gauge Fuel Pressure Gauge ..... Fuel Pump Fuel Strainer ..... Oil Pressure Gauge .... Tachometer .... Water Level Gauge .... Water Temperature Gauge.

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Barometer .... Compass .... Navigation Watches .... Octant .... Protractor .... Time of Trip Clock.

Write for our Marine Catalogue. Enclose fifty cents, and we will include a Pioneer Course Protractor — a real convenience.

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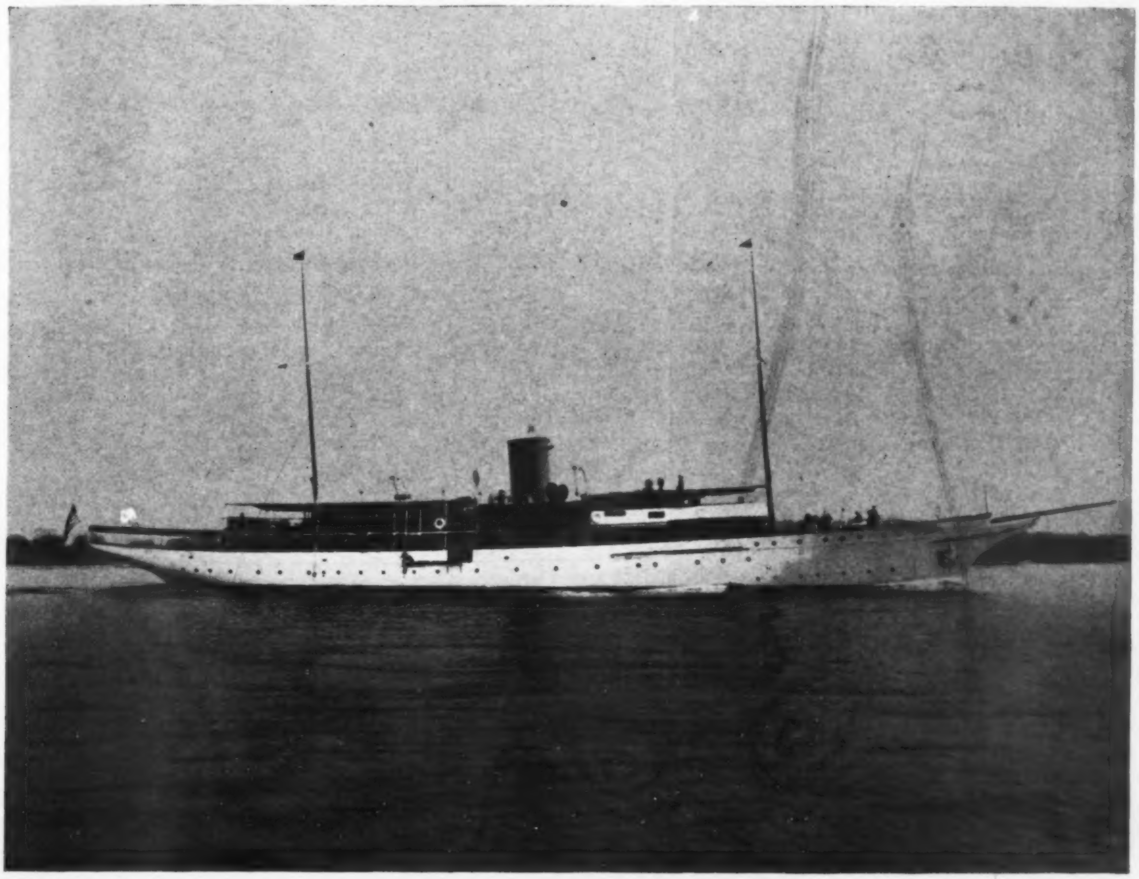


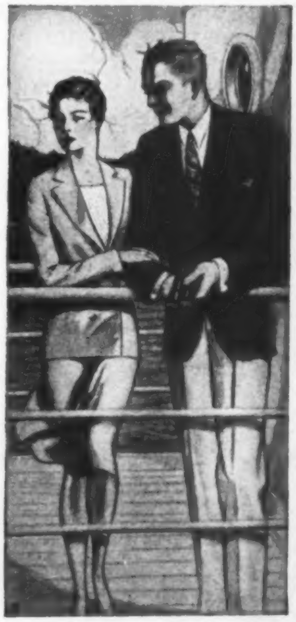
NAKHODA

Owner, Fred J. Fisher. Designers, Cox & Stevens, Inc., and John H. Wells, Inc. Builders, Pusey and Jones Corp. Length overall, 236 ft. Speed, 18 knots. Power, two Winton-Diesels, total 2200 h. p.

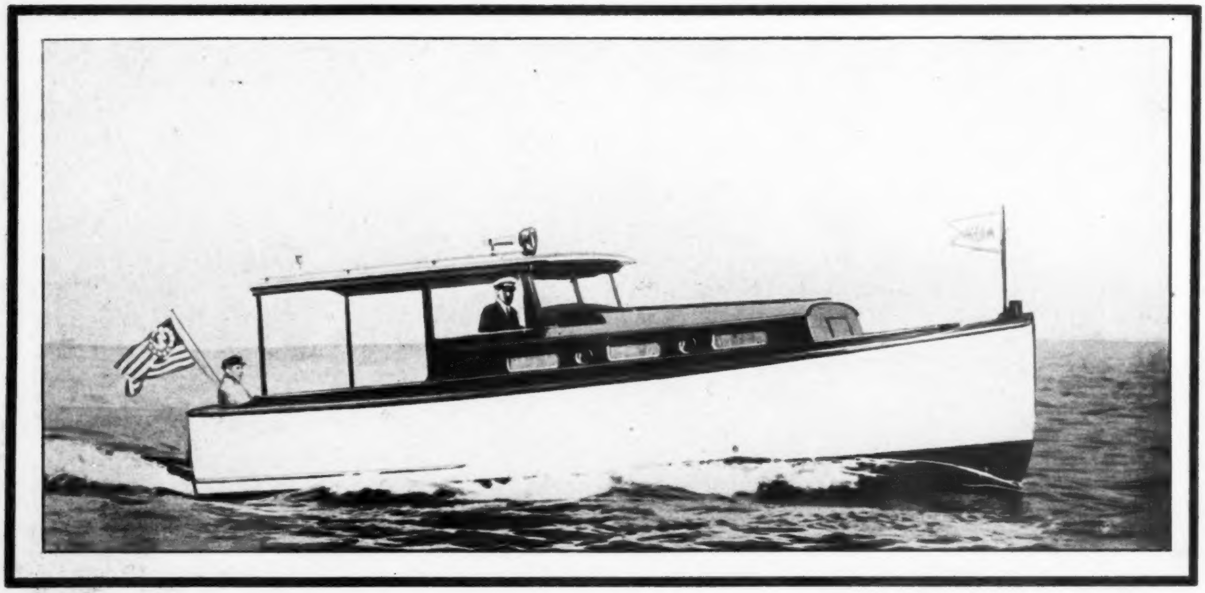
ONE OF THE WORLD'S LARGEST, FASTEST, MOST LUXURIOUS YACHTS—WINTON-POWERED

WINTON

THE WINTON ENGINE COMPANY, CLEVELAND



The smallest practicable home afloat



The Elco Twenty-seven Foot Marinette

In the Marinette, the smallest and most economical model of the Elco Fleet, the utmost skill in design and construction are clearly apparent. . . . In larger boats, the problems facing the designer are less exacting — there are feet instead of inches to work with. But to include the comforts of a home in a 27-foot cruiser is a feat worthy of note. . . . The Elco Marinette has many features commonly associated only with much larger boats — a bow cockpit, ahead of the spray, a roomy after-cockpit, ideal for fishing; completely furnished cabin, with two lower and two upper berths, and lavatory adjoining; and a fully equipped galley. . . . Though small and inexpensive, the Elco Marinette gives its owner command of coastal sea and inland water. Staunch in construction, reliable in operation, this trim cruiser provides for cooking, dining and sleeping aboard in complete comfort and contentment. It is this model particularly which establishes the truth of Elco's oft-repeated statement: *"You no longer need be wealthy to become a yachtsman."*

VISIT PORT ELCO OR WRITE FOR COMPLETE INFORMATION

You are invited to visit Port Elco, 247 Park Avenue (at 46th Street), New York, where the entire Elco Fleet is now on display. Or, address Dept. MBG, Port Elco, for full particulars and descriptive literature. (Plant and Marine Basin, at Bayonne, N. J.)

Elco
CRUISERS

ELCO CRUISERS ARE ALSO DISPLAYED SOLD AND SERVICED BY:

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354 Howard Avenue, Bridgeport, Conn.

Roy M. Brewster
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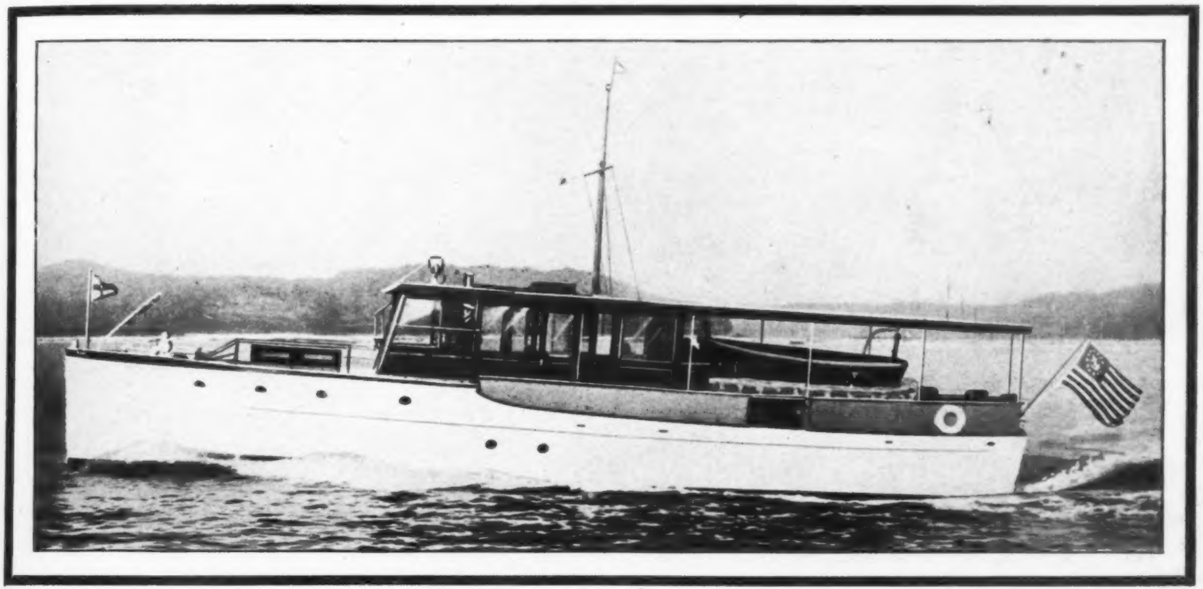
Fulton Marine Co.
138-140 East 4th St., Cincinnati, Ohio

Queen of standardized cruisers



The Elco Fifty-Foot Motor Yacht

Few prospective yacht owners realize that without delay, without bother, they can own a new, luxurious small yacht, completely equipped from stem to stern and of long-tested design and construction. . . . The Elco 50-foot, Twin Screw Motor Yacht exactly fits this category. The open deck-space, and the enclosed deck-house are so arranged as to provide for every sort of activity, in any weather, from swimming and fishing during the day to dancing in the evening. . . . The cabins, accommodating an owner's party of seven, are equipped with every luxury, extending even to a showerbath. . . . Only in size does the Elco 50-foot Motor Yacht differ from the finest private yachts afloat. Its moderate price is made possible by standardized construction—construction that has been proved sound in every detail. . . . The owner of this fine craft may well feel a justifiable pride in the most distinguished yachting company.

THE ELCO FLEET

Twenty-seven Foot Marinette	$3,475
Thirty Foot Veedette	5,750
Thirty-five Foot Cruisette	7,750
Thirty-eight Foot Cruiser	11,850
Forty-two Foot Cruiser	17,500
Fifty-foot Motor Yacht	26,500

(Afloat, Bayonne, N. J.)

(Elco operates a liberal financing plan for those wishing to purchase cruisers out of income.)

Elco
CRUISERS

Chrysler MARINE ENGINES

CHRYSLER MOTORS PRODUCT

THE MAJESTIC

8-cylinder—3½" bore x 5" stroke

High Duty—130-150 H. P. at 2400-3200 R. P. M.
With Reduction Gear—130-150 H. P. at 1200-1600 Propeller Speed.

THE IMPERIAL

6-cylinder—3⅝" bore x 5" stroke

High Duty—65-125 H. P. at 1600-3200 R. P. M.
Medium Duty—40-65 H. P. at 1000-1600 R. P. M.
With Reduction Gear—65-125 H. P. at 800-1600 Propeller Speed.

THE ROYAL

6-cylinder—3¼" bore x 5" stroke

High Duty—50-82 H. P. at 1600-2800 R. P. M.
Medium Duty—30-50 H. P. at 1000-1600 R. P. M.
With Reduction Gear—30-50 H. P. at 500-800 Propeller Speed.

THE CROWN

6-cylinder—3⅛" bore x 4⅛" stroke

High Duty—75 H. P. at 3200 R. P. M.

The Chrysler line of marine engines now includes suitable sizes and types for boats ranging from an 18-foot runabout to a 75-foot cruiser. ***For further information, address Marine Engine Division, Chrysler Corporation, Detroit, Michigan.***

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Parents are really no trouble

ABOARD the Dawn Cruiser, you allow parents to operate the boat from the bridge. Of course it's your privilege to shout instructions and motion directions from the cockpit. They entertain their friends forward, pay for gasoline and groceries, but never disturb the worth-while party aft.

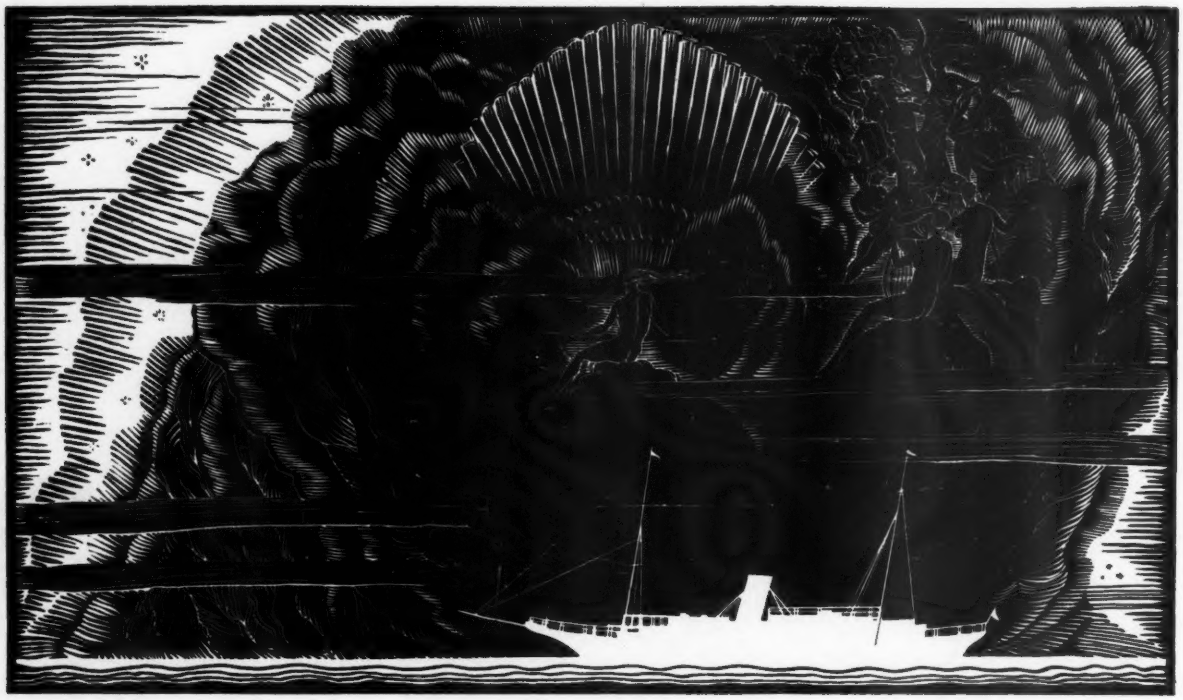
The layout of the Dawn Twin Screw Cruiser is a joy to everyone aboard. Owner's family, guests and crew all have privacy. Every cabin is an independent living unit. Each has its own toilet facilities and has a separate gangway to above decks.

You have admired exterior lines of both the Dawn 45 and the Dawn 48. Have you gone aboard and noted the beauty of finish, perfectly joined mahogany and rich, full upholstery? A cordial invitation is extended to you to visit our yards and not only inspect the finished boats but see how carefully every detail is perfected during their building.

DAWN BOAT CORPORATION, CLASON POINT, NEW YORK CITY-Tel. Westchester 7000-Established 1906

DAWN
TWIN-SCREW CRUISERS

Dawn 45-footer . . .	*Powered by twin-Lathrops, each 70 HP. . . .*	*Speed 14 M. P. H. . . .*	*$17,900 afloat at Clason Point*
Dawn 48-footer Express . .	*Powered by twin Sterling Petrels, each 150 HP. . . (5¼"x 6") . .*	*Speed 20 M. P. H. . .*	*$25,800 afloat at Clason Point*



Silence More Musical Than Any Song—
Rosetti

Silent as a Phantom Ship

Smoothly, quietly and without a trace of vibration, the Cooper-Bessemer Diesel powered yacht glides silently along like a phantom ship on a phantom sea. × On deck or in the staterooms there is neither objectionable noise nor irritating vibration. Truly, the silence of its power plant is "more musical than any song." × It is because of this quiet smoothness and unfailing reliability that modern yachtsmen insist on Cooper-Bessemer Diesels .... the engines that are powering America's largest and finest yachts.

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General Diesel Sales Offices. 25 West 43rd Street, Suite 301, New York City
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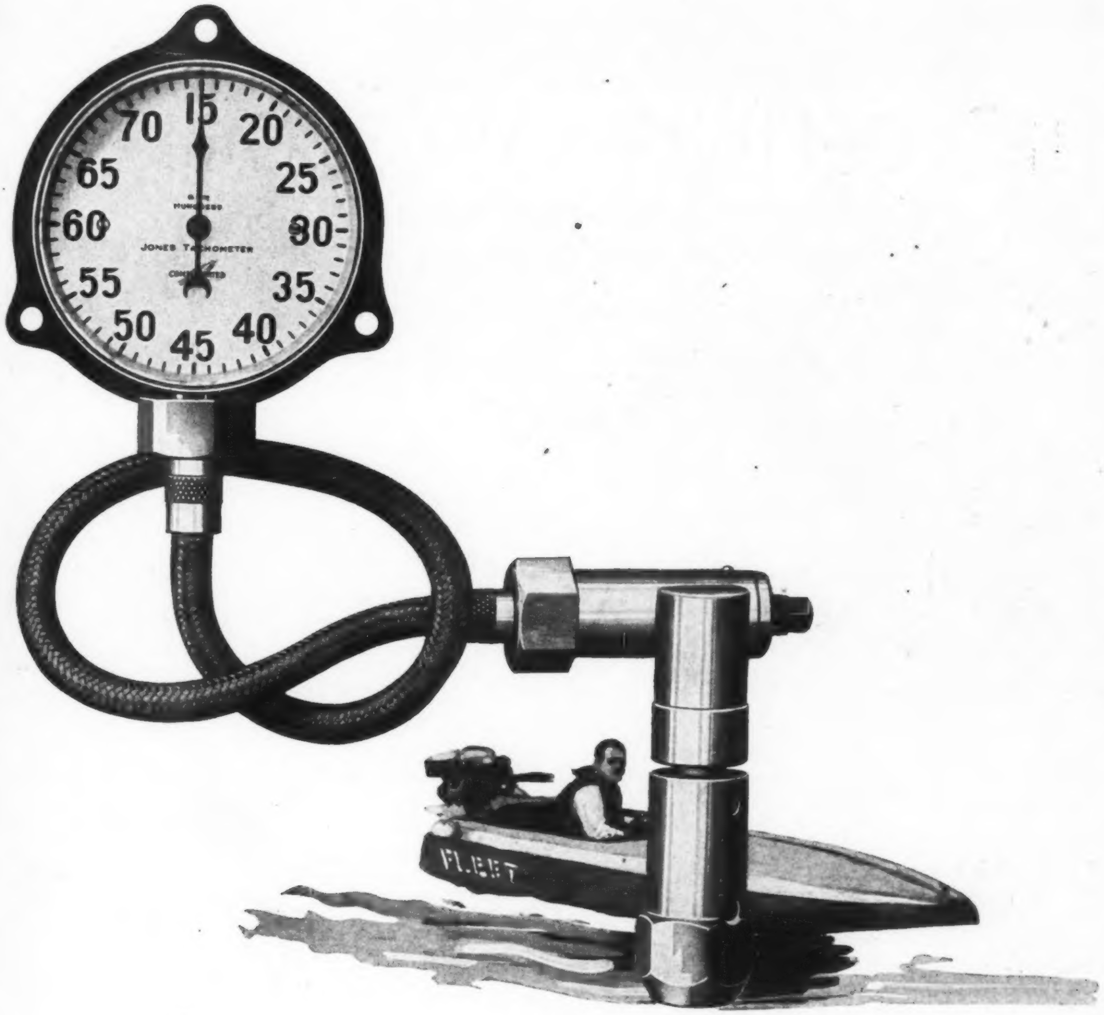
COOPER-BESSEMER
DIESEL MARINE ENGINES
·POWERING AMERICA'S FINEST YACHTS·



CONSOLIDATED INSTRUMENTS lists among its varied products the best centrifugal Tachometer, bar none, used by the motor-boat trade.

Whether for inboard or outboard motors, there is a Tachometer especially designed with fittings for your boat.

No one can deny the value of a Tachometer to the ships' master, for it brings right before his eyes the action of his motor, which should return him at his call a maximum number of revolutions per minute. Only an accurate Tachometer can keep this record for him.

Handsome panels with sets of useful instruments, chief among which is our accurate and reliable Tachometer, are the feature of Consolidated's offering to the Motor-Boat Trade.

CONSOLIDATED INSTRUMENT CO.

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THE FEELING OF SECURITY

Wonderful weather and a reliable pleasure craft! Whether your boat is a luxurious yacht or a dashing speed boat, "Auto-Lite equipped" gives you the feeling of security.

Marine designers and manufacturers take the utmost care in choosing the correct and finest electrical system. That is why so many specify Auto-Lite.

At every port of importance you will find efficient Auto-Lite specialists in starting, lighting and ignition. The Electric Auto-Lite Company, Office and Works: Toledo, Ohio . . . Also makers of Dé Jon.

AUTO-LITE

STARTING · LIGHTING AND IGNITION

Advertising index will be found on 3rd last page

join the *navy

. . . and see the world—*and not through any port hole either.* In this man's (and woman's) navy you're master of your own ship — captain and crew— proud as any admiral—and a lot more independent.

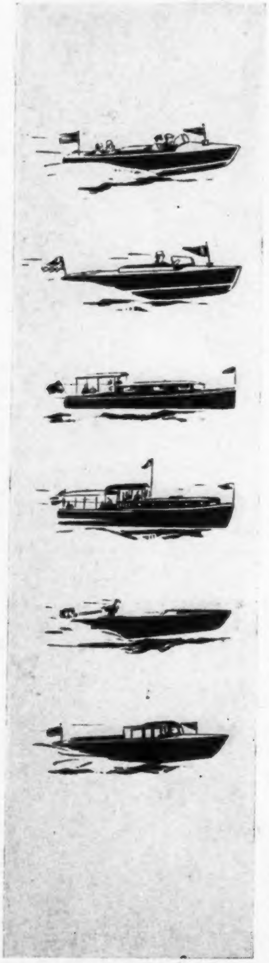
Certainly, you want one of these famous boats this season. Think of all the week-ends and vacation days ahead. Think of dust, din, detours and don'ts too—you won't find them on the water.

What name shall we put on the transom of *your* boat?

GAR WOOD INC.
THE GREATEST NAME IN MOTORBOATING
212 River Road Marysville, Mich.
Showroom and Factory Branch, 1858 Broadway, New York City

*This navy (small n) recognizes parity with no one—it's the Gar Wood navy of 14 dashing new models with 30 to 55 mile speed, incomparable soft riding and priced from $2,250 to $12,950.

Better Performance in Your Marine Engine when You Install Champions



Champion Spark Plugs are preferred in the overwhelming majority of all engines running on the waters of the world, and underlying that fact is a solid basis of reason and common sense. This common sense reason is Champion's plainly proved, easily demonstrated better performance in every marine engine, under every operating condition.

It isn't only the private owners who are sure they get better performance from Champions. The specialists in spark plug dependability—the marine racing champions of the world—add to this solid endorsement by insisting on Champions in every critical championship contest.

The majority of all motor boat, yacht, outboard and commercial boat owners have continued for years to prefer Champions—in constantly growing numbers—even to the extent of replacing others with Champions.

These owners testify to the fact that Champions do improve performance, and that renewals every year maintain it, even though Champions will continue to give service almost indefinitely.

Champion dealers everywhere stand ready to advise you of the one correct size and type that will develop the greatest performance from your marine engine.

CHAMPION
REG.U.S.PAT.OFF.

CHAMPION

SPARK • PLUGS

TOLEDO, OHIO **WINDSOR, ONTARIO**

CHRIS-CRAFT
The Accepted Standard of Motor Boat Value . .

The secret of Chris-Craft's popularity and leadership, expressed in current sales volume, far out-running all previous records, may be summed up in one word—value.

As much or as little as you may know about boats, there is one quick, positive, safe way to make your selection, and that is to look for the Chris-Craft name.

Each year, many individuals who never before owned a boat and who confess little knowledge of comparative boat values, become Chris-Craft owners in just this way.

The Chris-Craft Crest symbolizes all that is most modern and most advanced in boat design and construction.

Purchasing in million foot lots, we are able to match the color and grain of wood perfectly.

Volume production provides decided economic advantages, due to straight-line production of standardized units.

Control of quality extends to the smallest of hardware fittings, which are designed exclusively for Chris-Craft.

Even a large percentage of our marine motors are made in our own marine motor division.

Add to these facts, the still more important one, that Chris-Craft boats are sold and serviced by the only world-wide boat sales and service organization in existence, and you have the complete story of Chris-Craft value, Chris-Craft leadership, Chris-Craft dominance in its industry.

See your nearest Chris-Craft merchant for information on the various models, or write for illustrated catalog.

CHRIS-CRAFT CORPORATION
387 Detroit Road - - - - - - Algonac, Michigan
New York Showrooms - - - 1 West 52nd St. at 5th Ave.

Chris-Craft
Leadership that is Ever Increasing

25 MODELS
Runabouts—Sedans—Commuters
Cruisers—Yachts—17 to 48 feet
$1295 to $35,000

A few desirable sales territories open. Wire for details.

"The Downdraft Carburetor is now applied to an increasing number of engines, having the air opening on the upper side and drawing air downward. No back-fire can reach the bilge and since fires from this cause are frequent this Downdraft Carburetor should be seriously considered."

From The Marine News, June Issue, "MORE ON FIRE PREVENTION ON MOTOR BOATS," by William J. Deed, Naval Architect, New York City

HOLLEY DOWNDRAFT CARBURETOR
used by

**Chrysler, Gray, Kermath, Lathrop, Lycoming,
Scripps, Chris-Craft, Speedway and Sterling**

HOLLEY CARBURETOR COMPANY
DETROIT, MICHIGAN

OFTEN SEEN

BUT SELDOM PASSED

At Yachting's Smartest Rendezvous

Robinson Cruisers and Commuters have become the focal point of dramatic enthusiasm for those yachtsmen who demand a fast hull distinguished by those rare attributes of sparkling beauty and jaunty sophistication. Robinson Seagulls are built with long sweeping lines and lithe free riding grace that bespeak a smartness of contour and a telling superiority of underbottom design—the product of accumulated experience and fine hand-wrought details of construction. Heavily ribbed and framed in oak, planked throughout in African mahogany, single and twin screw powered, built in three splendid sizes—39, 40 and 45 foot lengths—your Robinson Seagull will ride out the roughest weather with perfect ease because of its buoyant lift and vigorous speeds. Descriptive catalog, fully illustrated with genuine action pictures, will be mailed on request.

ROBINSON *Seagull* CRUISERS

The 45-foot Seagull Custom-Commuter with bridge deck controls is available in single and double cabin design. Speeds, twin-screw powered, up to 40 miles per hour.

ROBINSON MARINE CONSTRUCTION CO. - - BENTON HARBOR, MICHIGAN

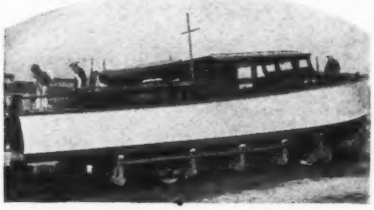
Nothing *Finer* Can Be Said of Any Motor Boat Than, It is -

POWERED
BY
LYCOMING

LYCOMING MOTORS

LYCOMING MANUFACTURING CO.
WILLIAMSPORT, PENNSYLVANIA

It is significant that Dodge Boats are exclusively powered by Lycoming Marine Engines



The Fairform Flyer, 45-ft. standardized cruiser built at Jacksonville, Florida, by HUCKINS YACHT CORP. *This fleet craft employs many interesting uses for Monel Metal.*

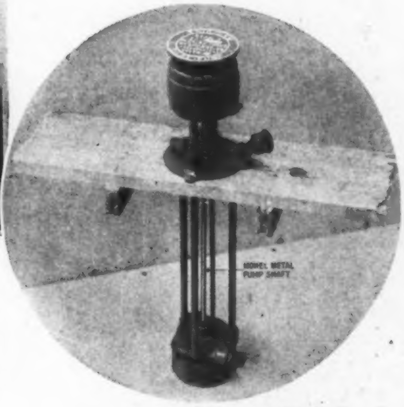
STRENGTH...CLEANABILITY...LONG LIFE

The silvery Monel Metal sink and drainboard helps good housekeeping afloat.

The Fairform Flyer boasts a Monel Metal bathtub as standard equipment.

Whatever your motorboat requirement—

Depend on Monel Metal!



Electric bilge-pump driven by a Monel Metal shaft.

WHAT a relief it is to know that the vital parts of your boat are constructed of material which requires a minimum of care and attention—yet which can be relied on to look well and perform dependably under severest conditions.

Monel Metal brings greater beauty, strength and durability to many parts and fittings of the modern motor boat. Since this silvery Nickel alloy cannot rust, and is extremely resistant to salt water corrosion, it is ideal for brightwork and other exposed parts, for it saves cleaning time and care.

It is stronger and tougher than steel, with a uniform rolled structure, and consequently is the most dependable, available material for bolts, tiller rope and other parts subject to stress and hard wear. Monel Metal takes a mirror-like almost frictionless polish which saves packing wear. Its strength and rigidity practically eliminate vibration and whip. These properties have led to the adoption of Monel Metal propeller and pump shafts by leading makers of standardized boats.

Consult your boatyard or marine mechanic about Monel Metal shafts and equipment for your present boat.

Send for Illustrated Booklet "Monel Metal Shafts and Brightwork"

THE same properties that make Monel Metal so valuable for propeller shafts, also make it the ideal metal for many other marine parts and fittings. Monel Metal is available in the following shapes and forms: sheets, tubing, strip, wire rope, wood screws, nails, rivets, bolts and nuts, lag screws, etc. Have your next boat put together with Monel Metal wood screws. For detailed information about Monel Metal in any form, write The International Nickel Company, Inc.

Monel Metal is a registered trade mark applied to a technically controlled nickel-copper alloy of high nickel content. Monel Metal is mined, smelted, refined, rolled and marketed solely by International Nickel.

MONEL METAL

Monel Metal shafts increase the life of babbitt or bearing bronze and are especially recommended with Goodrich Cutless rubber bearings.

THE INTERNATIONAL NICKEL COMPANY, INC., 67 WALL STREET, NEW YORK, N. Y.

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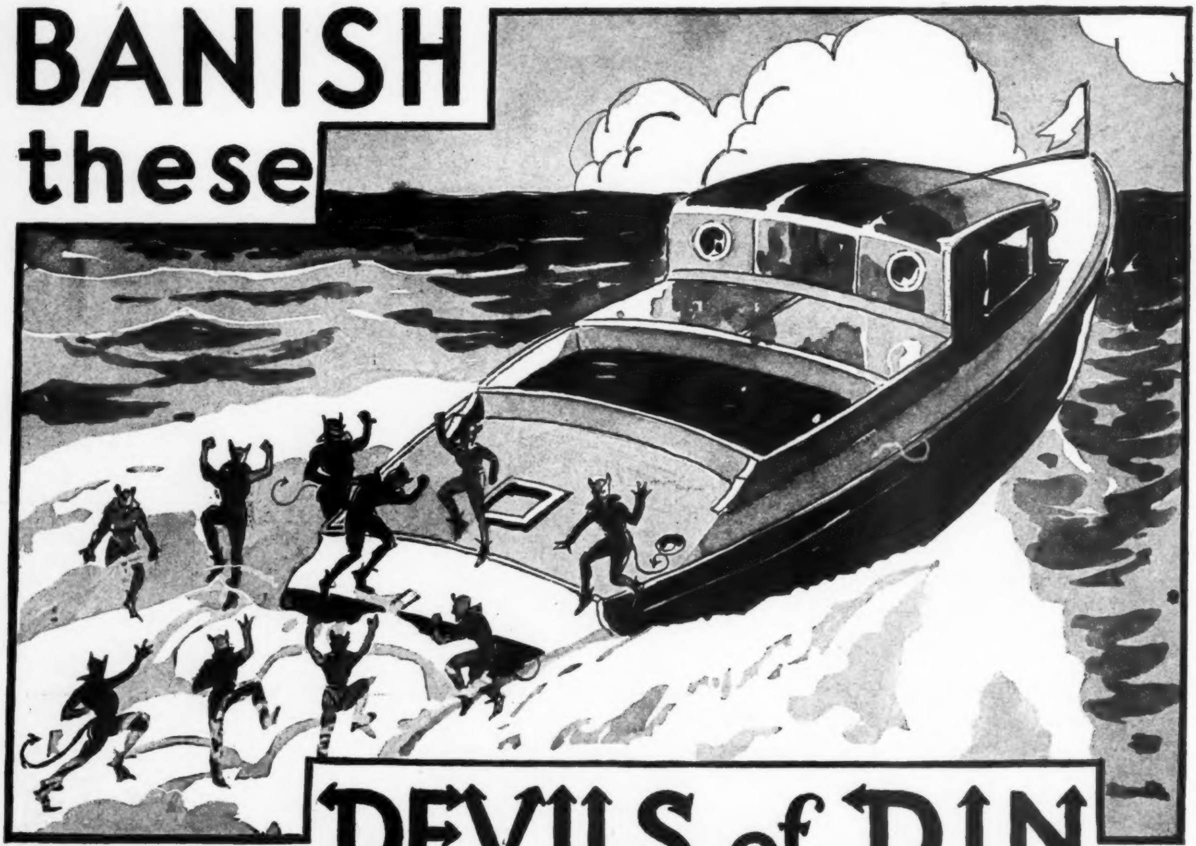

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The necessity for exhaust pipe noises is an exploded notion. The Devils of Din that accompany you on every cruise can be banished forever, giving boating a new zest, pleasure, comfort and relaxation . . . . Quiet.

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Maxim Silencers are not to be confused with mufflers for design, construction and results are vastly different. There are three points to remember:

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2. No loss of speed or power.
3. Available in sizes for any engine driven boat, at your dealer.

And the cost, quite insignificant.

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available for any
gasoline or Diesel
engine — wet
exhaust

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THE MAXIM SILENCER COMPANY
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SILENCE

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FOR ANY GAS OR DIESEL ENGINE

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THEY SERVE the tiny outboard-motor as well as the largest cruiser. They fuel the racing yachts and also find favor with pleasure craft. For Socony's proudest boast is its reliability.

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C. A. Long's *express cruiser Cantiquel, fueled with Socony Gasoline, captured the ten-mile race and the cup shown above, at the Ocean City Yacht Club's Open Regatta last year. Socony will supply the power for many another winning racing boat this year.*

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JULY, 1930

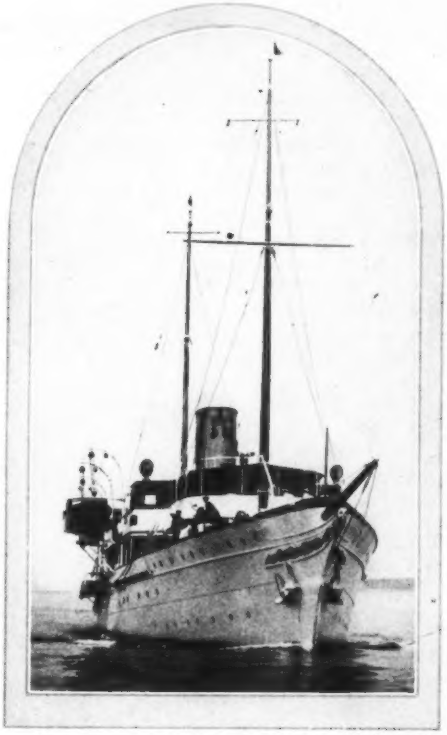
Vol. XLVI, No. 1

MoToR BoatinG

FIFTY-SEVENTH STREET
AT EIGHTH AVENUE
NEW YORK, N. Y.

Edited by

CHARLES F. CHAPMAN



Nakhoda, one of three sister ships recently built for prominent Detroiters at the Pusey & Jones plant from designs by Cox & Stevens and John Wells jointly. All are Winton diesel equipped

M. Rosenfeld

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Published monthly by the INTERNATIONAL MAGAZINE COMPANY, INC., at 57th Street, at Eighth Avenue, New York City.

RAY LONG	THOMAS J. WHITE	AUSTIN W. CLARK	ARTHUR S. MOORE
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WHAT YACHT CLUB MEMBERSHIP COSTS

Note: The first of the two amounts printed opposite the names of the yacht clubs represents the amount of the initiation fee. The second sum represents the annual dues of active or resident membership in the particular club. In a few instances clubs have non-resident, associate and junior memberships. As a rule these membership fees are less than those quoted.

Adelphia	$25.00	$9.00
Aeolian	25.00	12.00
Albany	20.00	24.00
Alpha Boat	50.00	25.00
American (Rye, N. Y.)	200.00	100.00
American (Newburyport, Mass.)	5.00	10.00
Annisquam	30.00	60.00
Arrow	25.00	6.00
Atlantic	50.00	100.00
Babylon	25.00	25.00
Balboa Palisades	400.00	60.00
Barbados	10.00	12.00
Barrington	....	9.50
Baychester Marine	50.00	48.00
Bay Head (Bay Head, N. J.)	20.00	30.00
Bay Head (Meadowmere Par, N. Y.)	10.00	10.00
Bay Ridge	50.00	15.00
Bay Shore	25.00	40.00
Bay State	5.00	10.00
Bay View (Toledo, Ohio)	10.00	15.00
Bay View (Detroit, Mich.)	350.00	50.00
Bay Waveland Yacht & Athletic	....	18.00
Bayside	75.00	75.00
Beachmont	3.00	6.00
Beach Point Club	1,850.00	357.50
Beaumont	25.00	12.00
Beechhurst	20.00	20.00
Belle Harbor	....	50.00
Belleville Motor Boat	3.00	6.00
Bellingham	5.00	12.00
Bellport Bay	....	10.00
Belmar	20.00	9.00
Ben Ma Chree Boat	15.00	12.00
Bergen Beach	25.00	50.00
Beverly	15.00	25.00
Biloxi	5.00	10.00
Biscayne Bay	25.00	40.00
Black Rock	200.00	125.00
Boothbay Harbor	5.00	10.00
Boston	30.00	60.00
Branford	2.00	8.00
Bremerton	10.00	6.00
Bristol	....	10.00
Broad Channel	5.00	9.00
Brockport	15.00	5.00
Bronx Motor Boat	5.00	9.00
Bronx County	10.00	6.00
Bronxonia	25.00	36.00
Brooklyn	....	15.00
Buccaneers Club	100.00	40.00
Buckeye Lake	50.00	15.00
Buffalo	50.00	50.00
Buffalo Launch	25.00	25.00
Buffalo Canoe	35.00	35.00
Bunker Hill	10.00	8.00
Burlington Launch	10.00	6.00
California (San Francisco)	50.00	30.00
California (Los Angeles)	110.00	52.80
Camden	15.00	10.00
Camden Motor Boat	10.00	25.00
Canarsie	500.00	5.00
Capital	25.00	60.00
Carolina	10.00	44.00
Catalina Island	100.00	20.00
Cedarhurst	....	50.00
Centerport	10.00	10.00
Chain	100.00	120.00
Charlevoix	3.00	3.00
Chelsea (Chelsea, Mass.)	5.00	10.00
Chelsea (Chelsea, N. Y.)	2.00	5.00
Chelsea (Atlantic City, N. J.)	50.00	50.00
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Cobweb	10.00	10.00
Cohasset	25.00	15.00
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Colonial	100.00	50.00
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Columbia (So. Boston, Mass.)	15.00	13.60
Columbia (Phila., Pa.)	5.00	5.00
Columbia (Washington, D. C.)	10.00	12.00
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Corinthian (Philadelphia)	150.00	75.00
Corinthian (Rocky River, Ohio)	25.00	30.00
Corinthian (San Francisco)	50.00	30.00
Corinthian (Washington)	50.00	24.00
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Cowichan Bay	5.00	5.00
Cragston Yacht & Country	200.00 to 600.00	175.00
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Cruising Club of America	15.00	10.00
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Detroit	500.00	75.00
Detroit Boat Club Yachtsmen	10.00	10.00
Country Club of Detroit	500.00	250.00
Detroit Boat	350.00	115.00
Devon	100.00	60.00
Diamond Point	1.00	6.00
Dominoe Club	25.00	15.00
Dorchester	5.00	15.00
Douglaston Club Yacht Squadron	....	10.00
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Eastern Point	....	5.00
Eau Gallie	10.00	10.00
Each Bay	50.00	40.00
Edgartown	....	25.00
Edgewater	25.00	18.00
Elk River	10.00	10.00
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Edison	10.00	6.00
Erie	22.00	33.00
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Excelsior	5.00	20.00
Fair Harbor	....	5.00
Fall River	....	5.00
Faragut Sportmen's Association	5.00	6.00
Federal	7.00	5.00
Fenwick	....	10.00
Fire Island	75.00	50.00
Fishers Island	20.00	....
Flatlands	10.00	10.00
Florida	50.00	60.00
Fort Myers	50.00	10.00
Fort Washington	5.00	3.00
Frying Pan	15.00	10.00
Gasparilla	10.00	5.00
Genesse Aquatic Club	10.00	6.00
Gibson Island Club	75.00	100.00
Gilbert's Bar	5.00	10.00
Grand Lake	50.00	20.00
Gravesend Bay	25.00	25.00
Great Kills	5.00	20.00
Greenwich	50.00	50.00
Grosse Pointe	3,000.00	300.00
Guttenberg Motor Boat Association	1.00	1.00
Halifax River	10.00	15.00
Hampton	10.00	24.00
Halloween	....	10.00
Harlem	24.00	40.00
Harpswell	10.00	10.00
Hartford	10.00	25.00
Haverhill	2.00	10.00
Hempstead Harbor Club	50.00	25.00
Hillsboro	5.00	24.00
Hingham	15.00	25.00
Hobe Sound	....	10.00
Hoboken	5.00	6.00
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(*Continued on page* 78)

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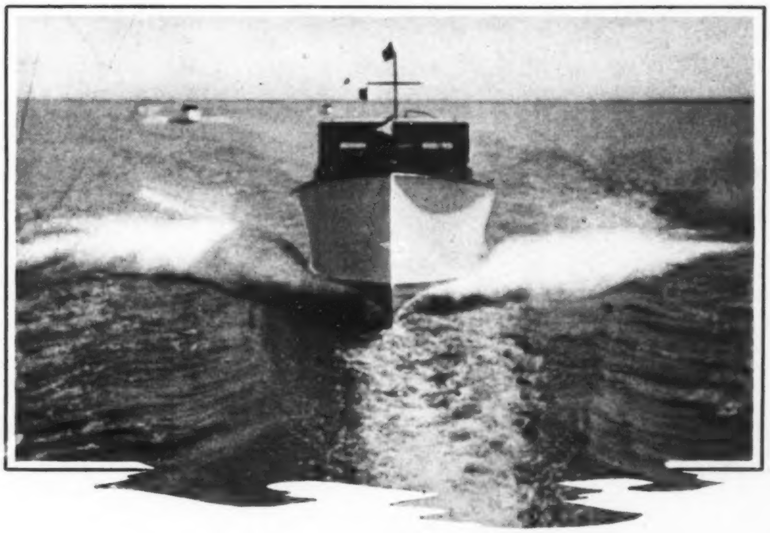

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JACKSONVILLE, FLORIDA

CALENDAR OF COMING EVENTS

July 4—Clearwater Yacht Club, Classes B, C and F Outboards, Clearwater, Florida.

July 11-12—Blennerhasset Regatta, Ohio River, Parkersburg, W. Va. Paul L. Summers, Parkersburg Yacht Club.

July 2-3-4—21st Annual Ocean Race Under the Auspices of Yachtsmen's Club—Dr. Eugene Swayne, 5617 Girard Ave., Philadelphia, Pa.

July 4—Ocean Sailing Race Los Angeles to Honolulu, H. B. Warren, 610 American Bank Building, Los Angeles, Cal.

July 4—Westerly Boat Club, Westerly, R. I.—E. V. Howe, 663 Thames St., Newport, R. I.

July 4-5—Albany Yacht Club, Albany, N. Y., Outboard Regatta. Ray Delahant, 35 State St., Albany, N. Y.

July 4-5—Madison, Indiana, 23rd Regatta, Mississippi Valley Power Boat Assn. A. T. Griffith, 377 Hippodrome Bldg., Peoria, Ill.

July 4-5-6—United States Power Squadrons. Rendezvous, Lloyd's Harbor, L. I.

July 7-19—Observation Races for the several contenders for the defense of the America's Cup.

July 12—Block Island Race for Cruisers, 100 N. Miles. New York Athletic Club—F. W. Horenburger, 959 Eighth Ave., New York, N. Y.

July 12—Canajahorie, N. Y.—Mohawk Valley Towns Association Regatta—Harold W. Cole, c/o The Journal, Scotia, N. Y.

July 13—Lake Winneconnet, Taunton, Mass.—E. V. Howe, 663 Thames St., Newport, R. I.

July 13—Interlake Yachting Association Regatta at Put-in-Bay, Ohio.

July 18-19—Portland, Me., Regatta—A. L. Anderson, Camden Yacht Club, Camden, Me.

July 19-20—Loon Lake, Wash. R. G. Reimers, Holley Mason Hardware Co., So. 157 Howard St., Spokane, Wash.

July 22—Lake Cobbosseecontee, Winthrop, Maine. A. L. Anderson, Camden Yacht Club, Camden, Maine.

July 22—Augusta, Me., Regatta—A. L. Anderson, Camden Yacht Club, Camden, Me.

July 25-26—Camden, Me., Regatta—A. L. Anderson, Camden Yacht Club, Camden, Me.

July 25-26—Newport, R. I.—Dr. H. P. Beck, Newport, R. I.

July 30-31—Outboard and Speedboat Races, New Bedford, Mass. (First race for Col. E. H. R. Green Round Hills Trophy.)

July 31-Aug. 2—Bay City, Mich. Eastern Michigan Water Carnival, Outboard regatta

Aug. 1—Tenth Annual Bayside-Block Island Auxiliary Handicap—Harry V. Spurr, 45 East 17th Street, N. Y. City.

August 1-3—Buffalo, N. Y. Regatta. A. C. Glasser, Sec'y, 122 Pearl St., Buffalo, N. Y.

Aug. 2—Detroit Recreation, Comm. Regatta, Belle Isle, Mich. Ivan Kirlin, Detroit Yacht Club, Detroit, Mich.

August 2-3—Stone Harbor, N. J.—Dr. Wm. Haines, Medical Arts Buildings, 16th & Walnut Sts., Philadephia, Pa.

August 7-9—Miles River Yacht Club, Miles River, Md. George Krill, St. Michaels, Md.

August 10—Camp Slocum, Kickamuit River, R. I.—E. V. Howe, 663 Thames St., Newport, R. I.

Aug. 12-13-14—New Bedford Yacht Club Race, Week for sailing craft. Geo. H. Sistan, 474 Park St., New Bedford, Mass.

Aug. 15—Boothbay Harbor, Maine. M. C. Welles, 8 Arlington St., Boston, Mass.

August 16-17—Gold Cup Regatta, Red Bank, N. J.—T. S. Field, 254 Fourth Ave., New York, N. Y.

August 20-30—Official Trial Races to select the defender of the America's Cup against the challenge of Sir Thomas Lipton.

Aug. 21-23—Lake Sunapee, N. H. D. D. Coffin, c/o C. H. Dexter & Sons, Windsor Locks, Conn.

Aug. 22-23—Seneca Lake Regatta. L. A. Taylor, Geneva Chamber of Commerce, Geneva, N. Y.

Aug. 23-24—Greenwood Lake, N. Y. J. L. Holt, 53 Park Place, New York City.

August 24—Lake Winneconnet, Taunton, Mass.—E. V. Howe, 663 Thames St., Newport, R. I.

Aug. 24—Annual Ocean Race, Sheepshead Bay Yacht Club. 45 nautical miles. W. J. Copplestone, Sheepshead Bay Yacht Club, Sheepshead Bay, N. Y.

August 29-September 1—Harmsworth Trophy race, Detroit, Mich.—W. D. Edenburn, General Motors Bldg., Detroit, Mich.

August 30-September 1, United States Power Squadrons. Rendezvous, Hamburg Cove, Connecticut River.

Aug. 31-Sept. 1—Rhode Island Yacht Club, Providence, R. I. E. V. Howe, 663 Thames St., Newport, R. I.

September 5-6—Middletown, Conn. Intersectional Outboard Championship.

September 6-7—Cincinnati, Ohio—E. C. McHugh, Times Star Bldg., Cincinnati, Ohio.

September 6-7—Cruising Club of America. Auxiliary cruising race. Schuyler Dillon, 131 State St., Boston, Mass.

September 7—Westerly Boat Club, Westerly, R. I.—E. V. Howe, 663 Thames St., Newport, R. I.

Sept. 8-9—Lake Merritt, Oakland, Calif. A. L. Bobrick, 111 Garey St., Los Angeles, Calif.

September 12-13—Presidents Cup Regatta, Washington, D. C.—W. A. Rogers, Washington, D. C.

September 12-13—Cruising Club of America rendezvous, Block Island. Schuyler Dillon, 131 State St., Boston, Mass.

September 13—Races for the America's Cup. American defender and Sir Thomas Lipton's Shamrock V.

Oct. 11-13—National Outboard Championship, Middletown, Conn. E. McNulty, Middletown, Conn.

RACING IN EUROPE

Union Internationale de Yachting Automobile

July 7 and 15—France, Herblay. All classes and outboards.

August 3—Sweden, Stockholm. All classes.

Aug. 14-24—Belgium International Meeting, Antwerp, Ostend, Liege, Belgium.

September 18-22—Italy, Venice. All classes.

DELAWARE RIVER EVENTS

Delaware River Yachtsmen's League

July 4-5—Municipal Regatta, auspices Trenton Yacht Club, trophies by City of Trenton—Outboards, speedboats, and cruisers.

July 12—Speedboat Regatta, Delaware River Y. C., Torresdale—John Wanamaker, Jr., trophy races.

July 13—Cruiser and Cabin Boat Championships of Delaware River, Wissinoming Y. C.

July 19—Annual Outboard and Speedboat Regatta of West End B. C., Chester, Pa.

July 26—Outboard and Speedboat Regatta of Keystone Y. C. and Delaware River Outboard Motorboat Assn., at Tacony.

July 27—Special Keystone Y. C. Cruiser and Cabin Boat Regatta, Tacony.

August 2-10—Annual Chesapeake Bay Cruise of Riverside Yacht Club.

August 8-9—Third Annual Philadelphia Outboard Regatta on Schuyl-

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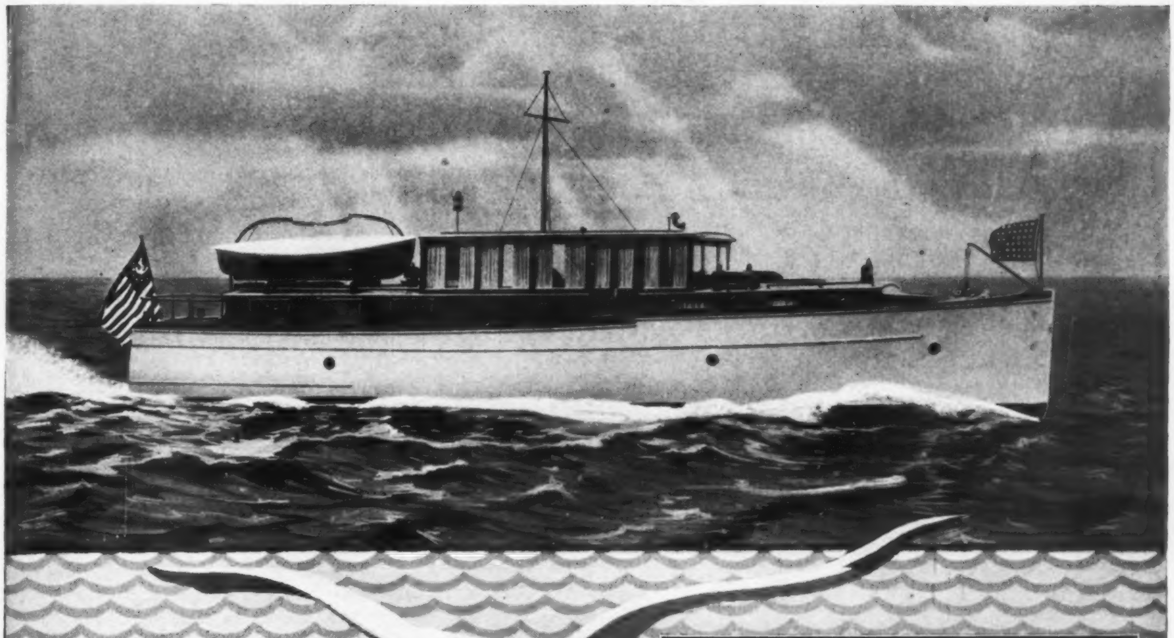

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Please send me a copy of "The Masterpiece of a Pioneer Boat Builder."

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Address.....................................

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WORLD OUTBOARD RECORDS

JUNE 15, 1930

ONE MILE

Class & Div.	Speed MPH.	Name of Boat	Driver	Motor	Boat	Place of Race	Date
A-I	*27.85	Blue Streak	Margaret Mullin	Lockwood	Elsinore	Balboa, Calif	Dec. 4, 1929
A-I	27.622	Misstep	B. Steacie	Lockwood	C. W. Crandall	Worcester, Mass.	May 29, 1930
A-II	27.135	Oh Oh	N. Kalat	Lockwood	Padula	Worcester, Mass.	May 30, 1929
A-II	*28.4	Blue Streak	Chuck Hall	Lockwood	Elsinore	Balboa, Calif.	Dec. 4, 1929
B-I	39.217	Toy	E. Spencer	Johnson	Harrison & Wythe	Worcester, Mass.	May 29, 1930
B-I	(N)*41.613	Baby Brontosaurus	Billy Lyon	Johnson	Crandall	Newport Beach, Cal.	Oct. 7, 1929
B-I	*43.974	Baby Brontosaurus	Billy Lyon	Johnson	Crandall	Balboa, Calif.	Dec. 4, 1929
B-II	36.735	Flying Cloud	H. Arnold	Johnson	Sulmock	Sacramento, Calif.	Mar. 30, 1930
B-II	(N)41.472	Salome	A. G. Martin	Johnson	Pierce	Newport Beach, Cal.	Oct. 7, 1929
B-II	*43.94	Crandall Comet	Charles Holt	Johnson	Crandall	Balboa, Calif.	Dec. 4, 1929
C-I	(N)*39.15	Bossert Pirate	W. Peterssen	Evinrude	Bossert	Albany, N. Y.	July 5, 1929
C-1	*43.711	Black Maria V	Mildred Milde	Evinrude	A. Thomson	Newport Beach, Cal.	Oct. 7, 1929
C-I	38.528	B-139	Hilda Mueller	Evinrude	Century	Worcester, Mass.	May 31, 1930
C-II	(N)*42.617	Black Maria V	Al Thomson	Evinrude	Thomson	Newport Beach, Cal.	Oct. 7, 1929
C-II	*43.192	Black Maria V	Al Thomson	Evinrude	Al Thomson	Newport Beach, Cal.	Oct. 7, 1929
C-II	42.20	Zev	Mildred Hickey	Johnson	Kelley	Worcester, Mass.	May 31, 1930
D-I	(N)*43.80	Big Ben	Harold Chapman	Johnson	Hallock	Albany, N. Y.	July 5, 1929
D-I	42.947	Dad-Daddy	T. Thompson	Johnson	Penn Yan	Worcester, Mass.	May 31, 1930
D-I	*47.15	Crandall Comet	Billy Lyon	Johnson	Crandall	Balboa, Calif.	Dec. 4, 1929
D-II	(N)*47.728	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Newport Beach, Cal.	Oct. 7, 1929
D-II	41.860	Lazy	F. Wilber	Johnson	Wilber	Sacramento, Calif.	Apr. 30, 1930
D-II	*49.48	Crandall Comet	H. G. Ferguson	Johnson	Crandall	Balboa, Calif.	Dec. 4, 1929
D-III	45.973	Baby Whale	Ross Maddocks	Johnson	Kelley	Worcester, Mass.	May 31, 1930
E-I	33.78	Fresno Flyer	Dick Loynes	Johnson	Ashbridge	Balboa, Calif.	Dec. 4, 1930
E-II	*39.353	Wildcat	F. E. Ludolph	Elto	Hooton	Peoria, Ill.	Oct. 15, 1929
F-III	47.876	Baby Whale	Ross Maddocks	Evinrude	Kelley	Worcester, Mass.	May 31, 1930

(N) Indicates record made on nautical mile course, not allowed in 1930.

FIVE MILES

A-I	26.986	Misstep	B. Steacie	Lockwood	C. W. Crandall	Worcester, Mass.	May 30, 1930
A-I1	25.824	Oh Oh	N. Kalat	Lockwood	Padula	Worcester, Mass.	May 29, 1930
B-I	37.267	Spencer Special	E. Spencer	Johnson	Spencer	Worcester, Mass.	May 30, 1930
B-II	38.626	Firefly	Charles Holt	Johnson	Crandall	Lake Elsinore, Cal.	May 18, 1930
B-II	*40.43	Ohkay	H. G. Ferguson	Johnson	Elsinore	Peoria, Ill.	Oct. 15, 1929
C-I	*41.09	Vagabond	B. A. Wheeler	Evinrude	Elsinore	Salton Sea, Calif.	Dec. 15, 1929
C-I	39.30	Trio	E. Waugh	Evinrude	Elsinore	Lake Elsinore, Cal.	April 6, 1930
C-II	40.358	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Lake Elsinore, Cal.	May 18, 1930
C-II	*42.35	Blue Streak	H. G. Ferguson	Evinrude	Elsinore	Salton Sea, Calif.	Dec. 15, 1929
D-I	41.783	Deke	S. Nunnelley	Johnson	Brobeil	Skaneateles, N. Y.	May 16, 1930
D-II	*45.34	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Salton Sea, Calif.	Dec. 15, 1929
D-II	43.165	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Lake Elsinore, Cal.	April 6, 1930
E-I	*34.82	Thoroughb'd Baby	Col. S. Tooey	Johnson	Fay & Bowen	Boston, Mass.	Oct. 5, 1929
E-II	*40.36	Ludington	J. Dunnell	Johnson	Ludington	Worcester, Mass.	May 30, 1929
F-I	36.73	Buckaroo	S. Nunnelley	Johnson	Brobeil	Skaneateles, N. Y.	May 16, 1930
F-II	41.37	Flying Ellen	N. L. Crawford	Johnson	Penn Yan	Skaneateles, N. Y.	May 16, 1930

SIX MILES

(See Note 1.)

B-I	*34.269	Crandall Comet	Charles Adams	Johnson	Crandall	Newport Beach, Cal.	Oct. 27, 1929
B-II	*40.54	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Lake Elsinore, Cal.	May 28, 1929
C-I	*37.75	Blue Streak IV	Chuck Hall	Johnson	Elsinore	Lake Elsinore, Cal.	May 28, 1929
C-II	*40.63	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Lake Elsinore, Cal.	May 28, 1929
D-II	*43.584	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Newport Beach, Cal.	Oct. 27, 1929
E-I	*40.227	Ceestepper	L. E. Preston	Johnson	Penn Yan	Red Bank, N. J.	Aug. 27, 1929

TEN MILES

B-I	36.182	Flying Cloud II	Harry Arnold	Johnson	Sulmock	Lake Merritt, Cal.	Jan. 1, 1930
B-II	*38.83	Crandall Comet	Charles Holt	Johnson	Crandall	Salton Sea, Calif.	Dec. 15, 1929
C-I	*40.089	Miss Genn III	R. Cuppells	Evinrude	A. Smith	White Rock, Texas.	Sept. 8, 1929
C-II	*38.59	Blue Streak II	H. G. Ferguson	Evinrude	Holt	San Diego, Calif.	Jan. 16, 1928
D-I	*47.36	I'm Alone	E. Widegren	Johnson	Kelley	Oyster Bay, N. Y.	Sept. 29, 1929
D-II	*44.12	Blue Streak IV	H. G. Ferguson	Johnson	Elsinore	Lake Elsinore, Cal.	Sept. 22, 1929
D-II	40.54	Sleepy	F. Anderson	Johnson	Wilber	Sacramento, Calif.	Mar. 30, 1930
E-II	*40.36	Miss Mystery	L. F. Davids	Johnson	Fay & Bowen	Boston, Mass.	Oct. 5, 1929

FIFTEEN MILES

(See Note 1.)

B-I	*37.383	Crandall Comet	Charles Adams	Johnson	Crandall	Newport Beach, Cal.	Oct. 27, 1929
B-II	*40.40	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Lake Elsinore, Cal.	July 28, 1929
C-1	*35.785	Vagabond	B. A. Wheeler	Evinrude	Elsinore	Newport Beach, Cal.	Oct. 27, 1929
C-II	*40.31	Blue Streak IV	H. G. Ferguson	Johnson	Elsinore	Lake Elsinore, Cal.	July 28, 1929
D-II	*44.92	Blue Streak	H. G. Ferguson	Johnson	Elsinore	Salton Sea, Calif.	Dec. 15, 1929

*Record made under old rules with no restrictions on boat weights. These records to stand until December 31, 1930 unless broken by boats racing under 1930 rules.

Note 1.—Six and 15-mile records no longer permitted. These records to stand until December 31, 1930.

Records are allowed as follows: In Division I, 1 mile and 5 miles, Classes A, B, C, D, E and F; in Division II and III, 1 mile, 5 miles and 10 miles, Classes A, B, C, D, E and F. All records must be made at a regatta sanctioned by the American Power Boat Association or Mississippi Valley Power Boat Association approved by a National Outboard Referee and at least one member of the National Outboard Racing Commission. Records must be made on a one mile or a 2½-mile course. Only stock motors may be used and no one connected with the outboard industry will be awarded a record.

National Outboard Championships will be decided in 1930 at Middletown, Connecticut, on October 11, 12 and 13. Events will be held in Division II and Division III, Classes A, B, C, D, E and F.

The members of the National Outboard Racing Commission are as follows: C. F. Chapman, 959 Eighth Avenue, New York, N. Y.; A. L. Bobrick, 111 So. Garey St., Los Angeles, Calif.; George O. Hoehn, 201 North Wells St., Chicago, Ill.; A. T. Griffith, Hippodrome Bldg., Peoria, Ill; Ray Lechenger, Post Dispatch Bldg., Houston, Texas.

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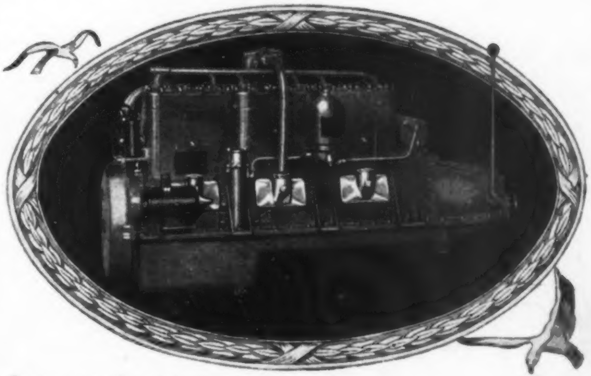

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ROBINSON SEA GULL
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STEPHENS
SUNBEAM "46"
WHEELER "PLAYMATES"*
Foreign
BRITISH POWER BOATS
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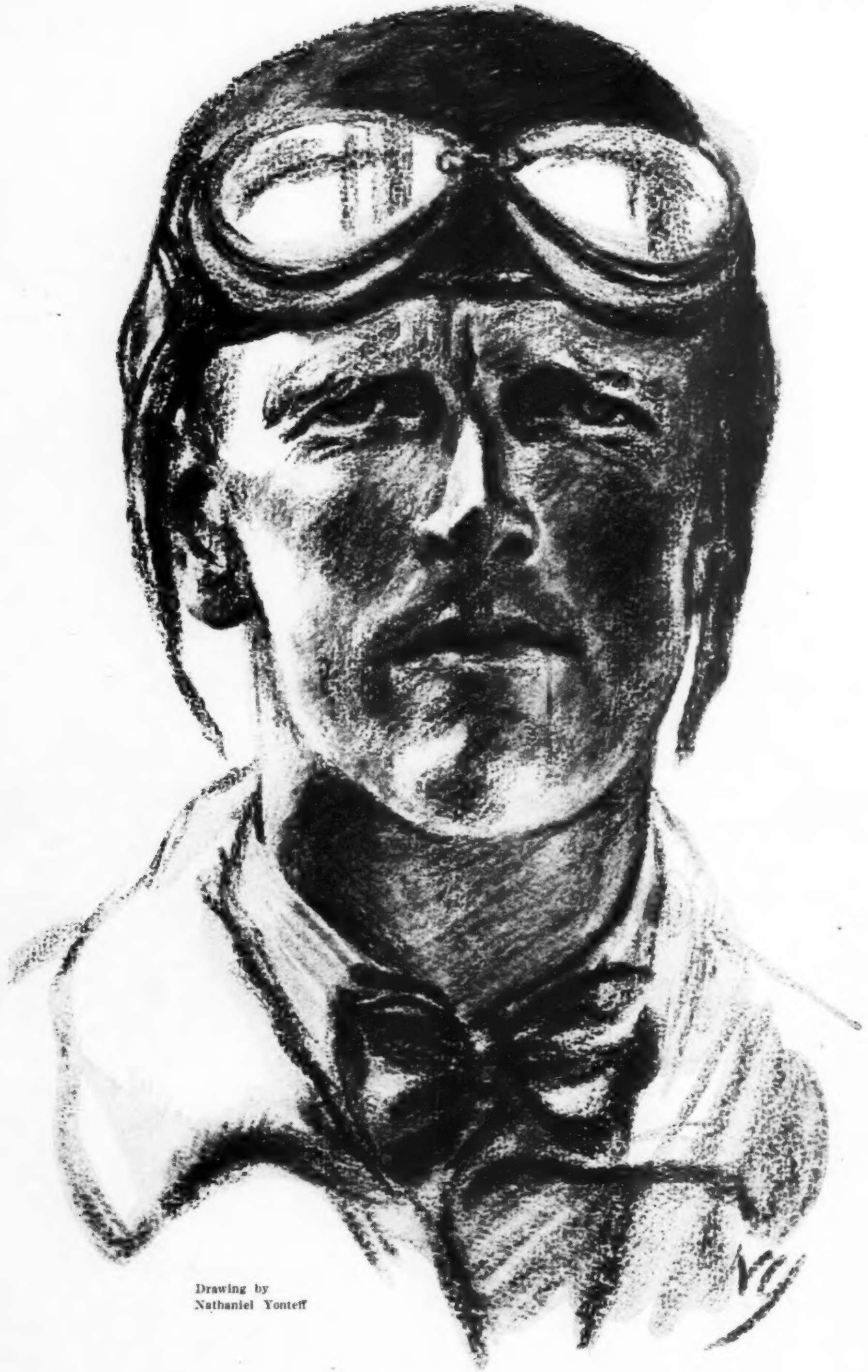
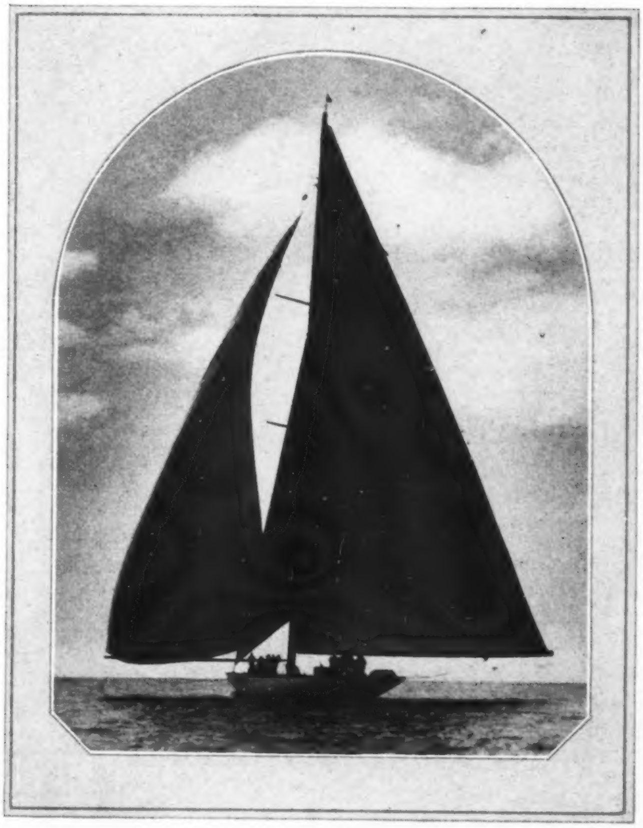


Sir Henry Segrave, challenger for the Harmsworth Trophy, twice winner in International motor boat racing and holder of the world's automobile record, who was killed in England on June 13. By his death the world loses a true sportsman, a cool, brave English gentleman, one of those daring men who in each generation add something fine and enduring to the glory of sportsmanship. He was loved by every American yachtsman who knew him

JULY MOTOR BOATING 1930



Yankee, built by George Lawley & Son Corp. from designs by Frank C. Paine, will be sailed by John S. Lawrence, Chandler C. Hovey and the designer

Photographs by M. Rosenfeld

THE FIFTEENTH AMERICA'S CUP MATCH

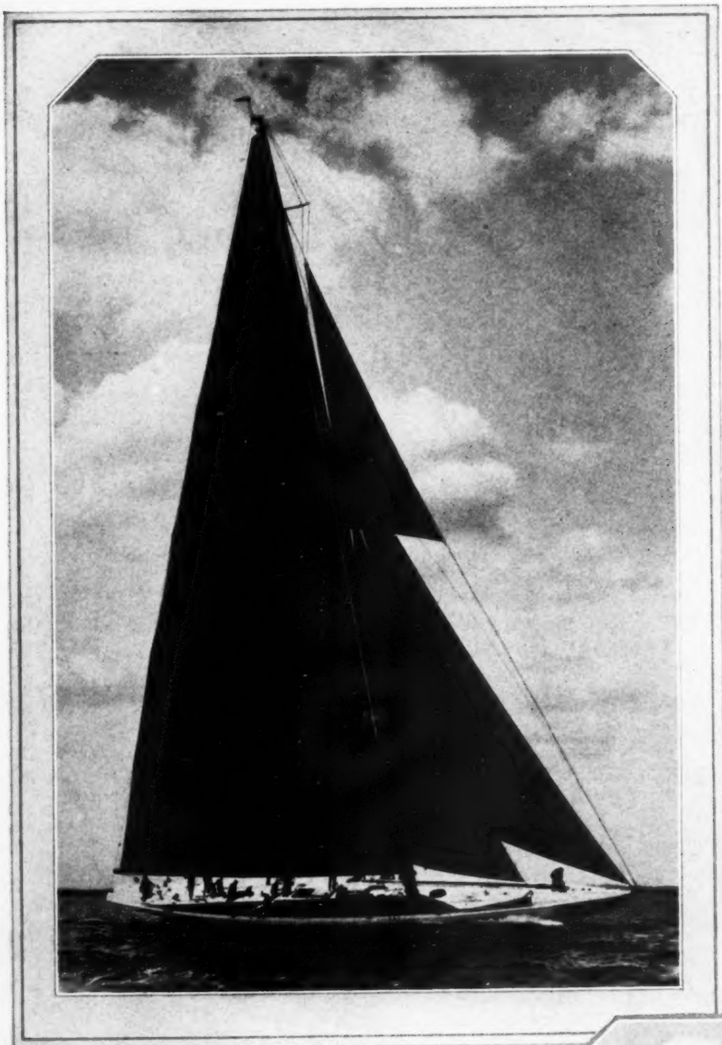
Challenge of Sir Thomas Lipton for Famous Trophy to be Contended by the Best of Four Defending Yachts Now Undergoing Elimination Trials

THIS fall—September thirteenth to be exact—will see the beginning of another series of match races for the most earnestly contested sports trophy in yachting history. Since 1861 when the schooner yacht America first won the cup which has ever since borne that yacht's name, the trophy has been challenged for thirteen times. The competition in 1930 will make the fifteenth time that a series of races has been held for the famous cup, which when it was first offered cost less than a thousand dollars. Each match has consisted of from one to five races with the more recent races going to the best three out of five. The conditions for this year have been changed so that the winner of four out of seven races will take the cup. Altogether 39 distinct races have been sailed.

Committees of the Royal Ulster Yacht Club and the New York Yacht Club have agreed on conditions to govern the 1930 races which are briefly as follows: The first contest is to be sailed on Saturday, September thirteen, with a race on each successive week day unless a contestant may desire more time when one day may intervene. Sundays are not considered.

The start and finish will be at a special buoy established by the Lighthouse Department, nine statute miles southeast of Brentons Reef Light vessel.

Courses for the odd numbered races will be 15



Enterprise, the first of the big sloops to be completed, also won the first time trial in which three new and two older boats competed

Commodore Harold S. Vanderbilt and W. Starling Burgess, commander and designer of the sloop Enterprise, one of four defending yachts

International News Reel

nautical miles to windward or leeward and return, while the course for even numbered races will consist of a 30 mile triangle of approximately 10 nautical miles to a side. Compass directions for the day's courses will be shown by signal flags. The start each day will be as nearly 10:30 A.M., E.S.T., as practical with no race starting later than 12:30. Provision is also made for postponement in the event of severe weather, fog or accident. A time limit of five and one-half hours is set, and if neither yacht finishes within that time the race shall not count and will be resailed.

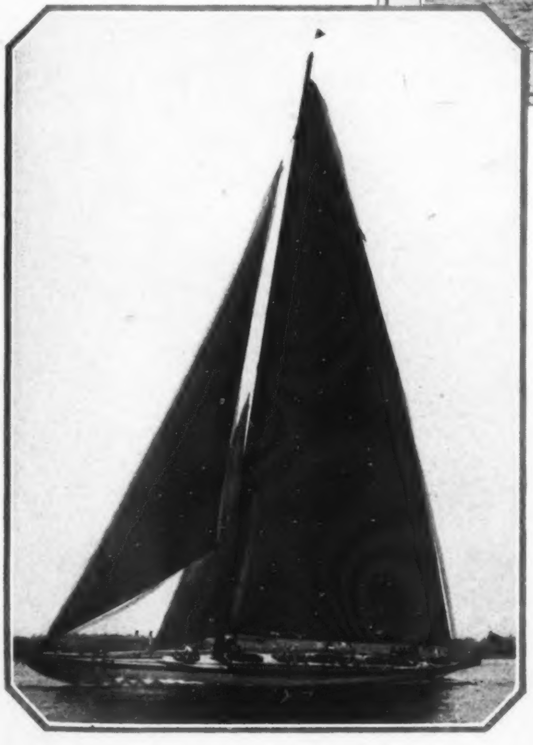
The conditions further require that the yachts shall not rate over 76-feet and will sail without a time allowance. The defending yacht will be selected and the challenger advised at least one week before the first race. There are also further provisions concerning the measurement and a requirement for remeasurement in the event of alterations to sail or trim of either yacht.

It has been variously estimated that each of these boats will consume from $500,000 to $800,000 in money with a total expenditure on the part of the American defenders of close to $3,000,000. The expenditures involved in bringing the challenger over together with the expenses of the New York Yacht Club will approach another $1,000,000, making it necessary to spend at least $4,000,000 in the attempt to win or defend this trophy. Each of the sloops will carry the private signal of one of her owners so that she will be readily distinguishable. Some delays have occurred in the final launching and equipping of Yankee and as this is written she has just about reached the point of being able to compete with her rivals.

The fine sloops which race for this famous trophy now are radically different from the style of boat which raced back in 1851 when this race was started. It seems that some yachting friends, whose names have since been lost to history, met in London that year and in a discussion it was suggested that one of the New York Pilot boats be sent to England to compete against the best of English yachts. A syndicate of five members of the New York Yacht Club headed by Commodore John C. Stevens and George L. Schuyler undertook the construction of a suitable boat and she was in due time completed and christened America. She finally sailed abroad where Commodore Stevens issued a challenge for a race but there were no replies forthcoming. After several weeks he decided to enter the boat in a race offered by the British Royal Yacht Squadron which went around the Isle of Wight. The race covered 53 miles and after many handicaps America was successful in beating her next nearest competitor by a matter of about eight minutes, thus winning this trophy for the New York Yacht Club for the first time. Eighteen boats took part in this first contest with eighteen varieties of rig and size. There were no allowances and the result of America's victory was a radical change in both rigging and hulls of British yachts.

After the first contest, the trophy lay dormant for 17 years when James Ashbury, an Englishman, proposed a new series of races which were to include a visit to England of a boat which would then sail in races there. This was to be followed by a race from Cowes to New York concluding with a match consisting of two out of three races around Long Island for the America's cup. A definite challenge was finally sent and Cambria raced the American schooner Dauntless to New York resulting in the American boat winning by less than two hours. A race around the New York Yacht Club course concluded the match and the small schooner Magic proved to be the winner with the challenger Cambria in eighth place.

In 1871 Mr. Ashbury challenged again with a schooner yacht Livonia, the series to consist of the best four of seven races. The schooner yacht Columbia owned by Franklin Osgood was named as the defender. In the first race Columbia ran away from Livonia to such an extent that the public lost interest. Columbia won by 27:04 corrected time. The second race was also won by Columbia, this time by 5:11 with her corrected time for the thirty miles recorded as 3:07:41¾. This is the fastest time ever recorded for a thirty mile race and stands to this day. It is reported that Columbia suffered some accidents in the third race which resulted in Livonia being the winner by 15:10 and also resulted in a new boat being selected as the defender. This boat Sappho won the fourth race by the wide margin of 30:21 and during the fifth and last race Livonia got away to a good lead but was finally beaten by Sappho by 5:27.



Whirlwind is to be sailed by Paul Hammond and Landon K. Thorne, also built by Lawley from Herreshoff designs

Weetamoe was successful in the second, third and fourth trials. Her after guard contains George Nichols, Junius S. Morgan and Clinton H. Crane, her designer

. Not until 1876 was additional interest aroused in this trophy, when Major Gifford of Toronto challenged with the Canadian schooner yacht Countess of Dufferin. Two races were sailed, the defender being Madeline owned by John S. Dickinson which easily outsailed the challenger. Madeline's time in the first race was 9:58 better and in the second race 27:14 better.

(*Continued on page* 70)

SOCIETY SPENDS A DAY

Mrs. Dodge Sloane about to board a tender at Glen Cove. She wears a summer yachting costume with a luxurious beaver coat

Photographs by
International News Reel

Mr. and Mrs. John W. Davis prepare to view the races of the Cup Defenders off Glen Cove

Miss Grace Amory is an interested spectator of Enterprise winning the first race

Miss Barbara Babcock in the fast runabout from which she viewed the first of the trial races of the American's Cup Defenders

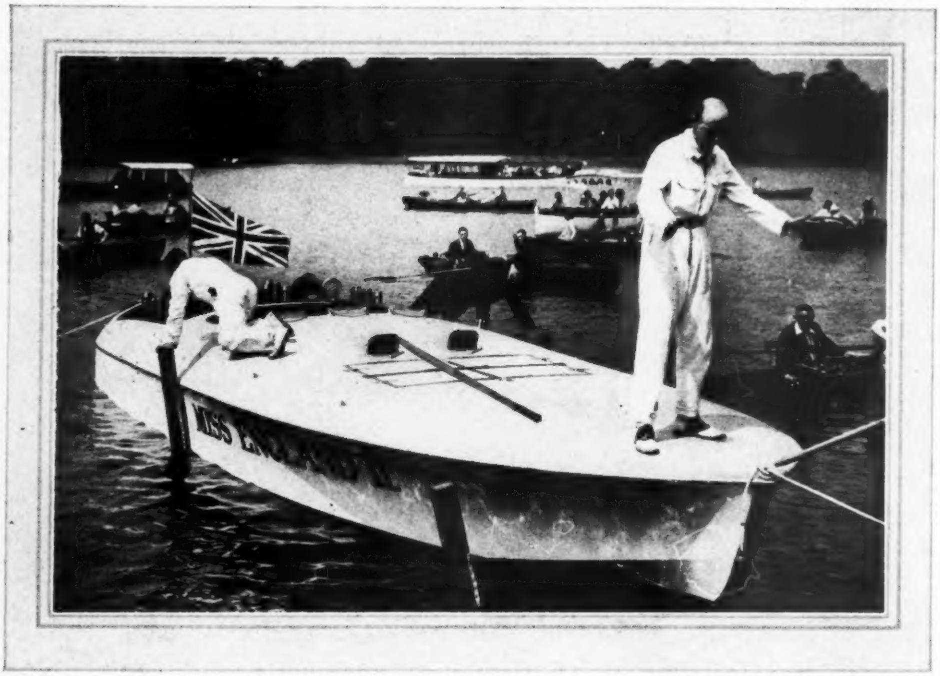
AT CUP DEFENDER TRIALS

Harry Payne Whitney, boarding his tender at Glen Cove, Long Island, to witness one of the America's Cup trials

Miss Florence Loew waiting to board her tender prior to the Cup Race trials

Mrs. Lawrence Harriman at the Glen Cove Station of the New York Yacht Club. She was one of a distinguished gathering who watched the racing

Mrs. G. McCulloch Miller, formerly Miss Flora Whitney, in her tender enroute to her father's yacht Whileaway



© Photographs by Pacific and Atlantic

Sir Henry Segrave on the bow of Miss England shortly before the fatal trial which reuslted in his death

MAJOR SEGRAVE KILLED AS HE SETS WORLD SPEED BOAT MARK

Miss England II, the New Harmsworth Race Challenger, Upsets on Lake Windermere, England

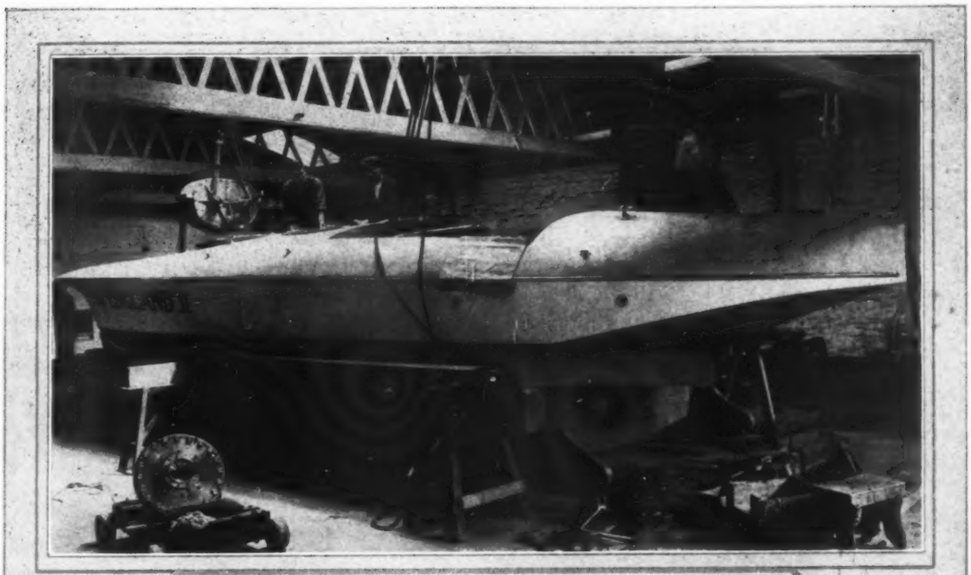
See Also Page 30

IN the death of Sir Henry Segrave, who was killed at Lake Windermere, England, on June 13th, the world loses its only serious contender for International motor boat records now held by Gar Wood. Twice a victor over Commodore Wood in match races but which carried no International titles with them, Major Segrave had challenged for the Harmsworth trophy, representing the championship of the world and the race was scheduled to take place at Detroit next August 30 and September 1. He had built a new craft for these races, Miss England II. It was in the trials of this boat that Sir Henry met his death.

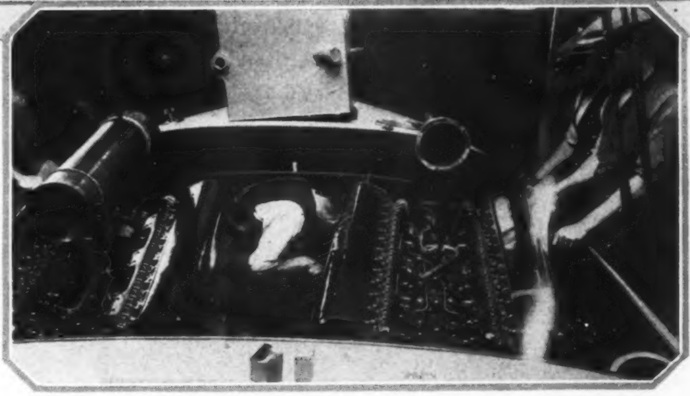
No person has ever done more in the scientific development of speed craft, than Major Segrave. Although he had been interested in speed boats for less than two years, yet the discoveries which he had made and applied to fast boats in this short time were of greater importance than anything ever before developed. Up to the time Major Segrave became interested in boats, our greatest increases in boat speed had come simply by adding more and more power to a hull. Little attention was given to hull design or underwater refinements, it being held that there should be no limit to boat speed provided that a sufficient amount of horsepower was crowded into the hull. Speeds of boats in this country did increase but as a rule it was the result of increased power.

Major Segrave believed that with the proper design of the hull itself much greater speeds would be possible without excessive powers. He built his first boat, Miss England I, to demonstrate these ideas. She was shipped to this country during the winter of 1929, without having first been tried out in England. The boat was somewhat radical in design and construction. Her first performance was not remarkable. The boat was slow, running not over 50 miles per hour and had other faults. But she was the Major's first experiment and demonstrated the truth of his viewpoints. After he returned to England, with the same power plant in the boat but by making certain refinements in the hull, shifting weights, changing propellers he was able to increase the speed from 50 to over 90 miles an hour. It was with this outfit that he defeated Gar Wood's Miss America VII in Italy last September although he had a single engine of around 800 horsepower while Miss America VII was powered with two motors totalling 2200 horsepower.

The success which Major Segrave had with his developments in Miss England I led him to build Miss



Miss England II just before launching on June 5. The large transmission gear is being set into place



The two 2,000 h.p. Rolls Royce motors in Miss England II, which operate a single propeller shaft through a gear box

England II for this year's race. He believed that he could easily attain a speed of 120 miles an hour which would be an increase of nearly 30 miles an hour over the best existing record. In this country it has taken 13 years to increase from 60 to 90 miles an hour so Major Segrave's plans were daring and outstanding, to say the least.

The new boat, Miss England II, in whose design and construction Major Segrave had embodied all of the lessons he learned with Miss England I, together with many more resulting from experiments with models and applying his knowledge of air craft design and construction, was successfully launched on Lake Windermere, England, on June 5th. Early trials of the boat seemed to be entirely successful. In several runs which the boat made on June 10th, it is reported that she covered a measured mile at a speed of 109.1 miles per hour. Soon after this run, Miss England II sheared off her propeller and was towed home.

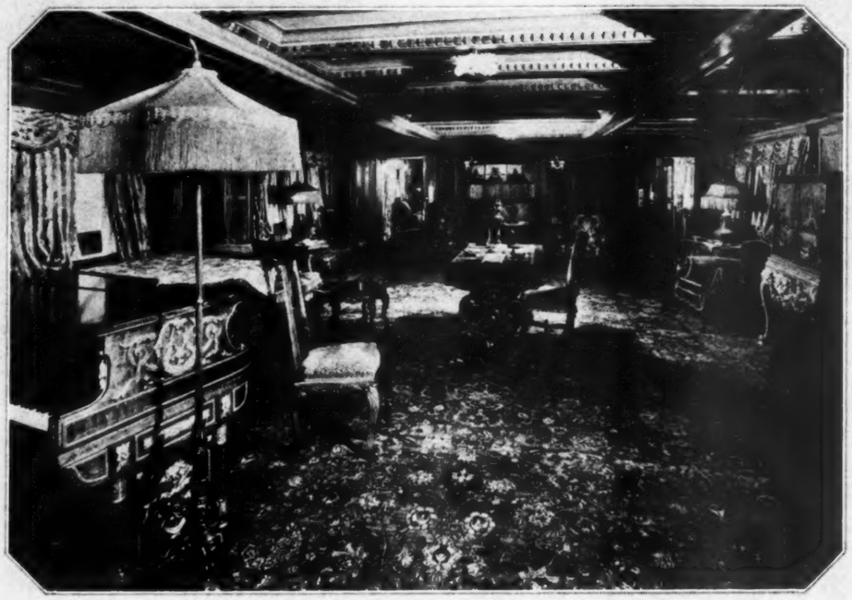
Further trials were attempted on June 13th. Two successful runs had been covered over a one-mile course, one of them at a speed of 96.41 m.p.h. and the second at a speed of 101.11 m.p.h. On the third run over the same course, soon after Major Segrave had opened up his 4000 horse power engines, at a speed which seems to be the greatest yet attained, Miss England II swerved suddenly and plunged beneath the lake's surface. She rose bottom up and it was seen that she had a large hole torn in her bottom. It is reported that the boat floated for a short time and then sank in 100 feet of water. If this is the case, then the cause of the accident may never be known. One theory is that a detachable step which was attached to the bottom of Miss England II had shaken loose and twisting underneath the boat had ripped out the bottom.

Another statement which has been made is that the propeller torque caused Miss England II to capsize. However, this theory does not appear to have much weight. Although it is true that Miss England II did transmit a total of nearly 4,000 horsepower through one shaft, yet with the propeller turning at 12,000 revolutions per minute the resultant torque at this speed was not as great as in many other successful boats.

The probable cause of the accident which seems most reasonable is that the boat hit some kind of a floating object. Shortly after the trials a piece of floating branch was picked up directly on the course over which Miss England ran. At the speed Miss England was travelling the smallest bit of flotsam would be very serious if struck.

Miss England II had two Rolls Royce Schneider Cup engines, developing a nominal horsepower of 1850 each. They were duplicates of the engines which established a new airplane speed of 351 miles per hour for Great Britain last Summer. Released to Sir Henry by special permission of the Air Ministry, their true character is shrouded in

(*Continued on page* 102)



The main salon and music room with its oriental carpeting and splendor

NAKHODA, OF SURPASSING SPLENDOR

New Diesel Yacht Most Magnificently Appointed Vessel in Recent Years—Every Possible Innovation for Comfort and Luxurious Ease Installed

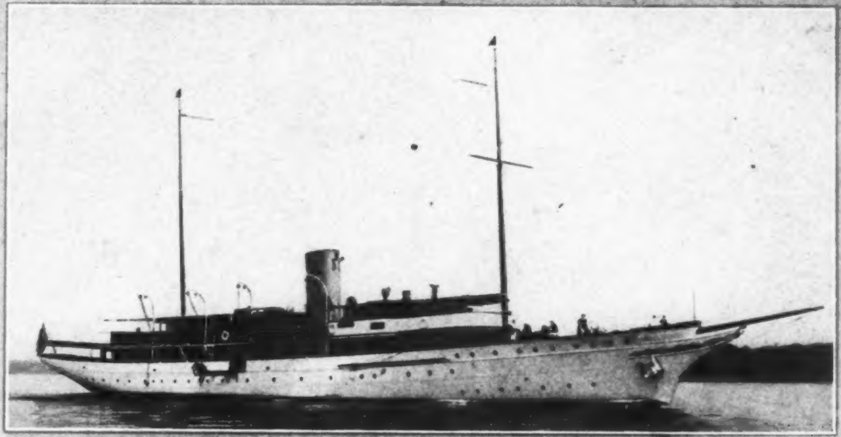
ONE of the most interesting achievements of the American shipbuilders art was the recent completion of three identical diesel yachts of large size Nakhoda, one of these built for Fred J. Fisher, has a length of slightly under 235 feet and like the others was designed jointly by Cox & Stevens, Incorporated and John H. Wells, Incorporated. All three of these new yachts were built by the Pusey & Jones Corp. and all are similarly equipped with two large Winton diesel engines totalling 2,200 h.p., operating twin screws. While the hull design and the machinery arrangement is identical there are some differences in the interior appointments to suit the needs of the several owners. The vessels are well adapted for extended cruising since they have a radius of at least 10,000 miles and are fitted for lavish entertaining since there are seven staterooms with six bath rooms and a crew of thirty-six to man the boat.

The appearance of Nakhoda follows the lines of the seagoing English clipper-stemmed yacht with a continuous sheer from stem to stern. The interior arrangement meets the personal requirements of the owner and every modern detail known to the shipbuilding art has been included in the equipment. The yacht is most luxurious in finish and fittings and as comfortable, safe and seaworthy as possible, no expense having been spared that would lead to this accomplishment.

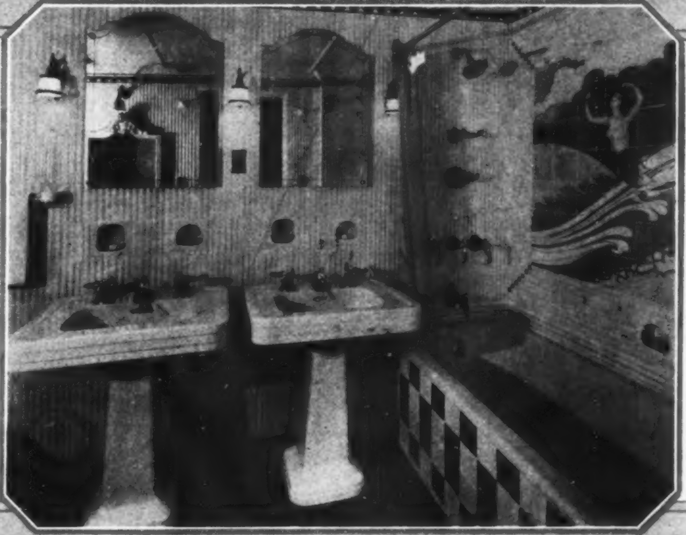
There is an upper or bridge deck which extends for the greater part of the vessel's length and this is available for deck games and lounging purposes while at sea. In addition there are two large deck houses, the forward one of which contains the quarters for the captain, the wireless room and the navigation room. The after house is used as a smoking room with gymnasium and club room adjoining.

On the main deck there is an exceptionally large and attractive dining room which is placed in the forward portion, with a well equipped pantry and galley adjacent thereto. From this dining room a wide hallway runs aft within the deck house to the after end, where there is a superb music and living room which occupies the full width of the yacht as well as the owner's lounge or library.

All of the quarters for the owner and his guests are on the berth deck aft. These consist of the owner's private apartments fitted with two baths as well as five double staterooms for guests, each of which has its own bathroom adjoining. There are also additional rooms for servants.



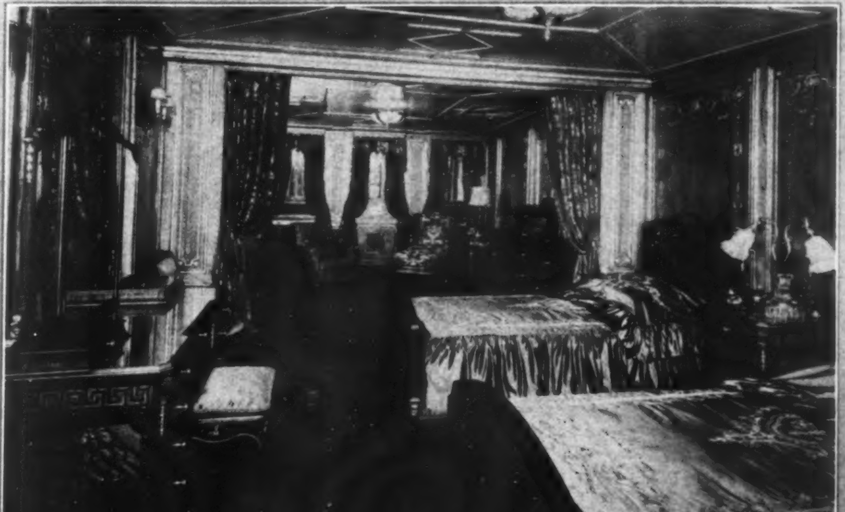
Nakhoda follows the appearance of the typical English yacht with a continuous sheer from stem to stern

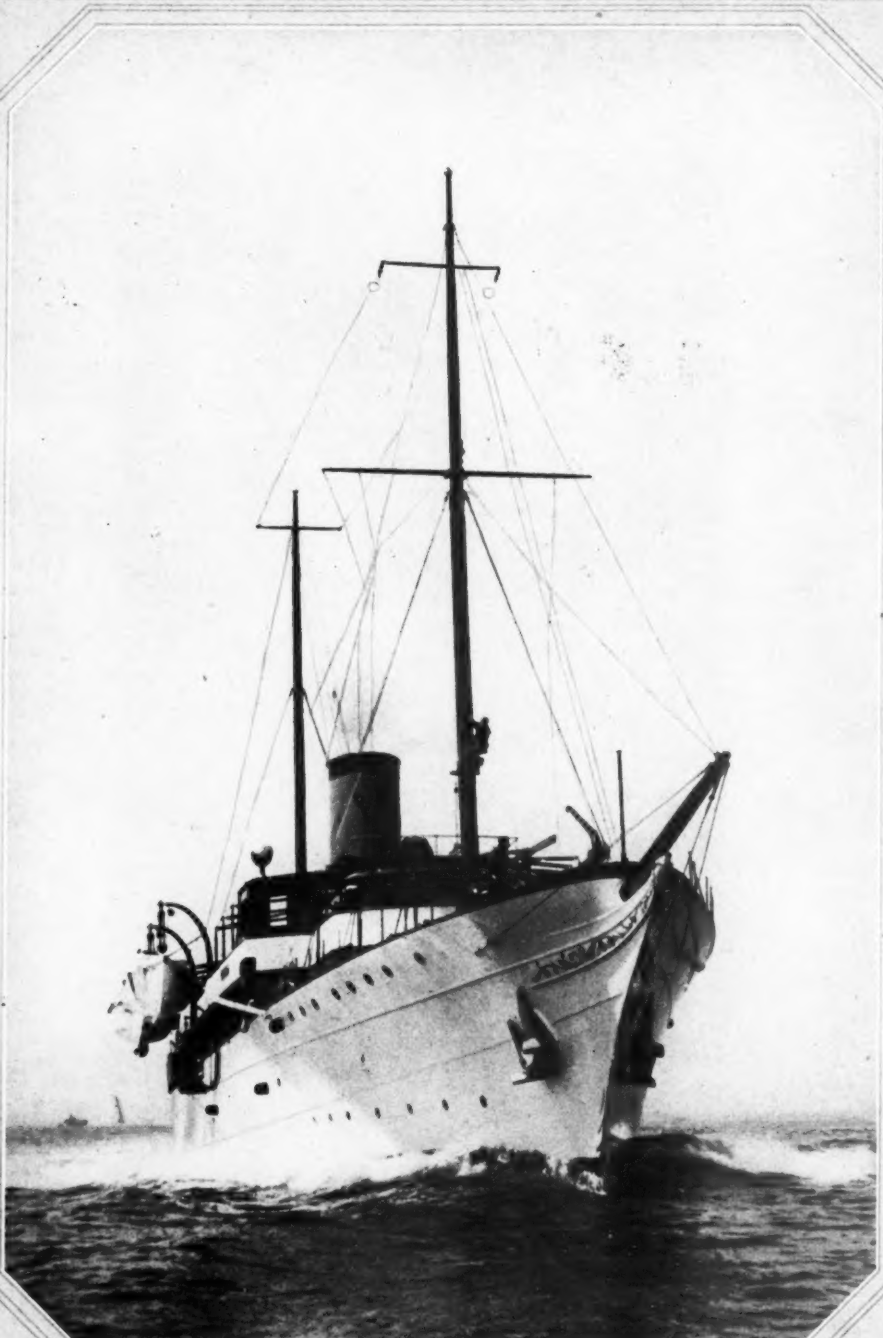


Interiors are ornately decorated and the owner's apartment shown is magnificent in the splendor of its furnishings

The bath in such a tub as this almost takes the form of a ceremony. Hot and cold salt or fresh water is available for the ablutions

Photographs by M. Rosenfeld

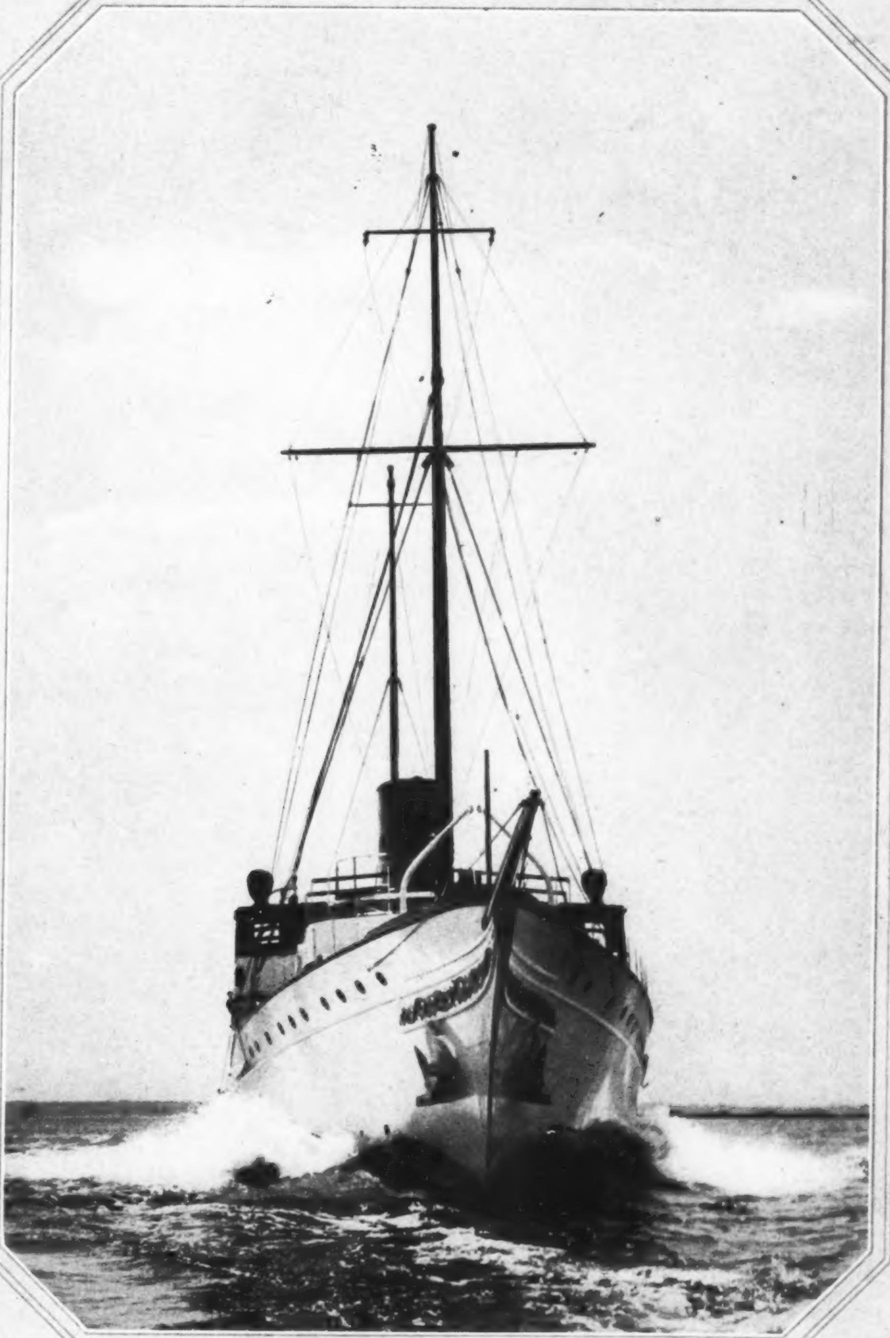




Photographs by M. Rosenfeld

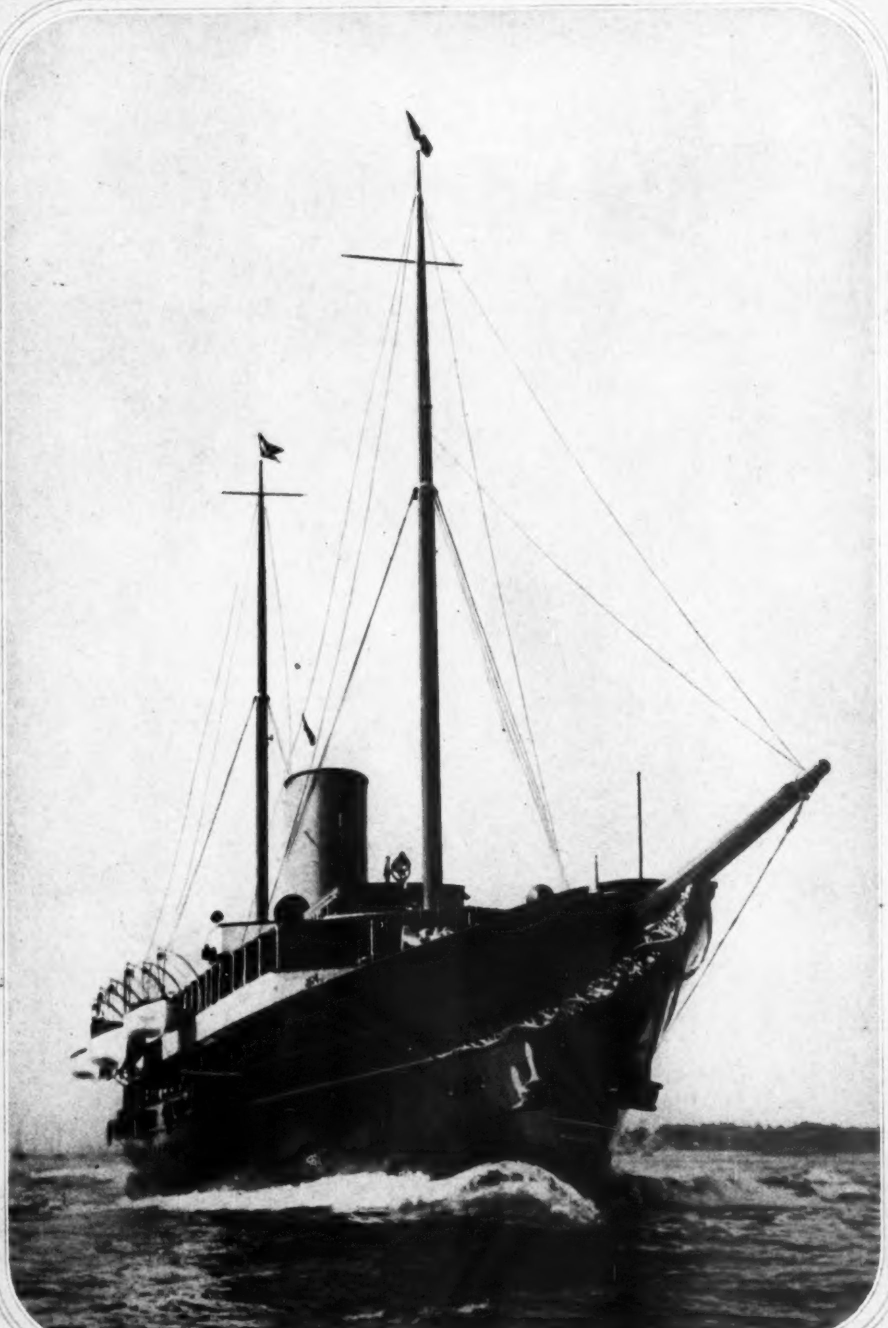
Cyprus, 247 feet in length, designed by Cox and Stevens for D. C. Jackling of New York. She is a large steel diesel engined ship and has just completed a maiden voyage half way round the world

CYPRUS



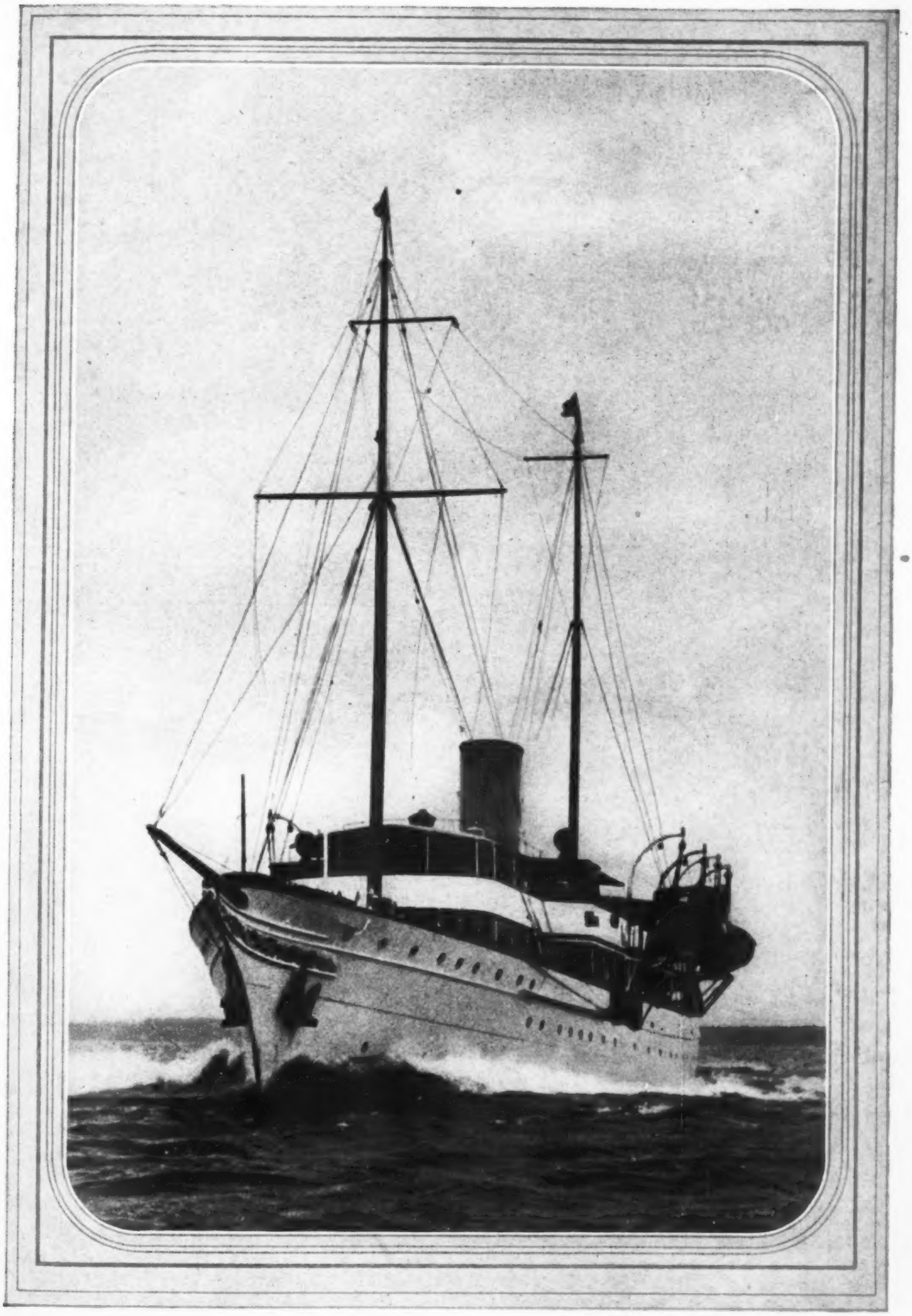
CAMBRIONA

Cambriona, one of the three sister ships built by Pusey & Jones with Winton diesel engines. She is owned by Walter O. Briggs of Detroit and was designed jointly by Cox and Stevens, Inc., and John Wells, Inc.



Corsair, the latest of a famous series of yachts. She is 343 feet in length, was designed for J. P. Morgan of New York by H. J. Gielow, Inc., and built of steel by the Bath Iron Works Corp.

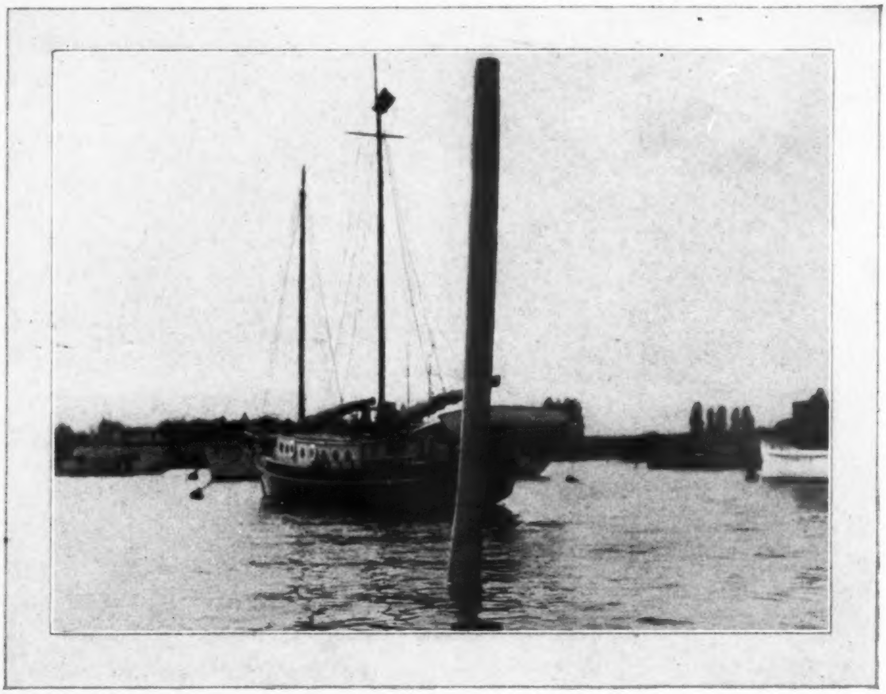
CORSAIR



RENE

Rene, another of the three sister ships similar to Cambriona and Nakhoda. Like her sister ships, Rene was built by Pusey & Jones from joint designs by Cox & Stevens, Inc., and John Wells, Inc., and is powered with two Winton diesels

Photographs U. S. Lighthouse Service



Anchorage buoy, Washington, D. C.

LIGHTHOUSE SERVICE PREPARES FOR SUMMER

Repair and Replacement Work Going on Continually to Keep Aids to Navigation in Proper Position as Guides for the Wandering Cruiser

By RALPH CLIFTON SMITH

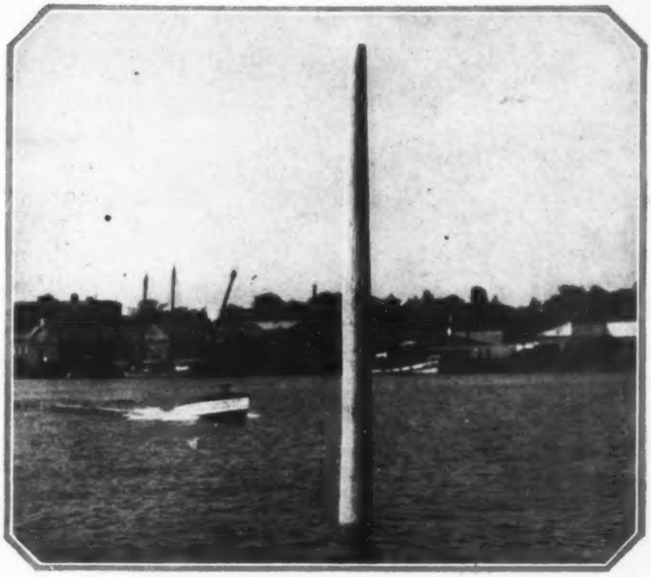
U. S. Lighthouse Service

WHEN summer comes and motorboats and yachts have slipped down the railways to begin another season of inland water and coastal cruising, attention is again focused upon the lighthouses, buoys, and other aids to navigation maintained by the Lighthouse Service, of the Department of Commerce, for even small boats must pay attention to channels if the season is to bring no mishaps. The Federal Lighthouse Service has anticipated this seasonal increase in the number of craft depending upon its aids for guidance, and is completing the work of removing the traces of winter's damage from its equipment, reestablishing its lights and buoys removed on account of ice, and putting in place many minor aids of value to the yachtsman. It recognizes the fact that the cruises of the yachtsmen are conducted for different purposes from those of the coastwise and ocean freighter, and that the yachtsmen's need for navigational aids is sometimes greater, because of this cruising in narrow waters.

If a count could be made, it would cause some surprise to know how many buoys and other aids have been established for the use of small boats, a large proportion of which are pleasure craft. While it is true that the more costly aids, such as lighthouses, and lightships, are primarily for the benefit of the larger vessels, there are many thousands of unlighted and lighted whistling and bell buoys in the comparatively shallow waters not frequented by ocean going vessels.

Outstanding examples of the marking and lighting of coastal and inland waters primarily if not exclusively for small craft, are certain parts of the coast of Maine, and the inland waterways of Virginia, North, and South Carolina. Along the central and eastern portion of the Maine coast there are, of course, a number of established steamer routes but many of the minor lights and buoys mark points, islands, and channels accessible only to the smaller craft. The inland route to southern ports, which follows the canals, rivers, and bays of New Jersey, Delaware, Maryland, Virginia, and other South Atlantic states, is solely for the use of small craft. Just now it is being greatly improved by extensive dredging operations being carried out by the U. S. Engineers, and the Lighthouse Service will have an adequate system of markers in place all the way to Florida just as soon as a permanent channel is established.

Within the limits of the laws governing the Lighthouse Service, much has been done for yacht clubs and other large groups of pleasure craft owners, to provide markers for the most frequented waters. Just at this time comes the announcement that a special sea buoy has been established and maintained during the summer off the entrance to Narragansett Bay, to mark the course over which the International yacht races and their preliminaries will be run. Still another buoy is to be established at Marblehead, Mass., to serve as a mooring for the cup challenger Yankee. On the Pacific coast, in San Francisco harbor, there have been established three buoys to mark the course for summer regattas participated in by the Associated Yacht Clubs and other clubs from the entire Pacific coast. There are many other similar cases where the yachting interests of the country are served by the temporary placing of buoys to mark race courses, anchorages, and entrances to yacht basins.



Spar buoy marking small boat anchorage

As there is a very definite pleasure to be derived from the successful operation of a small boat, with its problems of seamanship, mechanical skill, and the ability to withstand the vicissitudes of open water, so too is there a certain satisfaction in being able to navigate in a competent manner, with an understanding of the system of aids to navigation. These lights and buoys deserve a little study, for they are capable of imparting a great deal of information. A heeding of their warnings will often prevent a mishap.

Whether our boats are of shallow enough draft so that we may cut inside the buoys, or whether we follow the channel with the care of a transatlantic liner, the federal aids are always there to mark the deep water. The habit of observing the channel markings is a good one to form, for the man who can lay down a safe course by day has no fear of darkness overtaking him, and in time of storm is able to inspire others with confidence in his ability. The rather questionable thrill of corner-cutting and haphazard navigating is easily exchanged for the thrills of longer runs in open water where real pleasure takes the place of irksome hours spent on sand bars and in the repair yard.

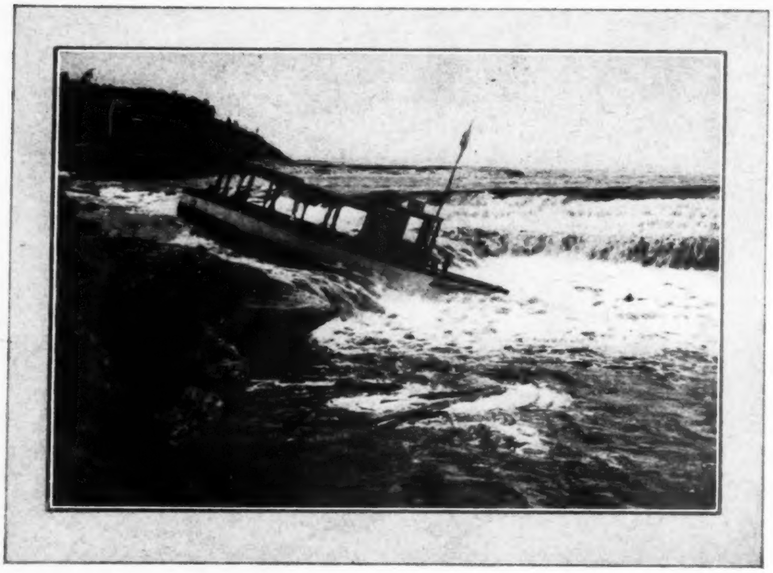
Gas and bell buoy, Potomac River

What greater pleasure is there for the yachtsman than a week or two spent on a long-planned cruise. With gas, oil, and water on board, a good supply of food in the galley, charts, light lists, a few simple navigating instruments in the chart-house or stowed in a waterproof box, and a few carefully chosen companions with which to divide the wheel watches, the coastal lights take on a new interest and point the way to distant pleasure grounds. If the cruise is off-shore and the goal yet many miles away, a night out and possibly several, is an interesting part of the experience.

Then light visibility takes on a new interest, and dividers are kept constantly in use, determining position and estimating the probable time when other lights will be sighted. If a blow comes along, and portholes must be dogged down, hatches secured, ventilators trimmed down wind, and all loose gear stowed below, the sea buoys and lighthouses take on a friendly aspect, for many of them point the way to safe harbors, should a sudden change of course be prudent. This friendly spirit of the lighthouses is very often expressed in other ways as well, for the crew of a vessel in distress is never ignored so long as it is humanly possible for the light keeper to be of help. Many a drifting small boat has been safely towed to the shelter of a lighthouse wharf, its occupants furnished with temporary lodging, to be sent on their way again in the morning with a supply of gas for their empty tank or a little practical help in the repairing of an engine. The help of these sturdy folk who spend their days upon tiny islands and other isolated spots, is of the kind which encourages the amateur navigator to go on, to match his wits against the sea, and to learn by experience the lessons necessary to a thorough enjoyment of boats.

When the summer or the trip is over there comes to the man who has studied the behavior of the water and has heeded the aids placed for his guidance, the satisfaction of having fully utilized his mental and physical powers in the efficient completion of a task to which not everyone is equal.

(*Continued on page* 154)



Louise running the gauntlet of a fourteen-foot waterfall at the Fort Vermilion Chutes on the Peace River

WHERE WATERS ARE TREACHEROUS

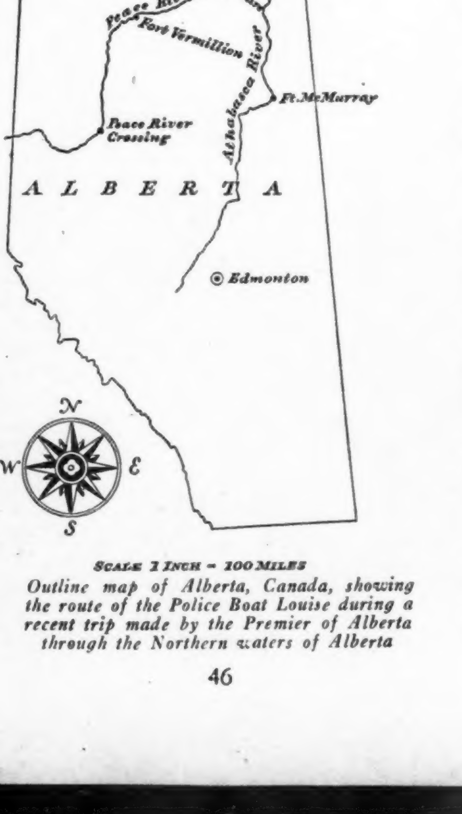
The Provincial Police of Alberta Conduct the Premier of the Province on a Tour of Inspection on the Peace, Slave and Athabasca Rivers

THE Provincial Police of Alberta, Canada are called upon to perform a variety of duties. Primarily, their job is to preserve law and order. In addition, they are expected to protect and propagate the prolific wild life of a virgin country. Occasionally they are asked to assume the role of pioneers in exploring the sparsely settled country of Northern Alberta.

During August of 1929, it was their duty and pleasure to conduct the Premier of Alberta and his party on a tour of exploration through the uncharted regions of Northern Alberta. In this northern country, void of railroads, roads, or even paths, only two methods of travel are available—by water or by foot. The Premier of Alberta chose to travel by water.

For this purpose the Provincial Police used their police boat Louise, a thirty-foot cabin type boat. In addition it was necessary to take along a forty-foot barge for the accessories and accommodations of the large party making the trip. Louise is powered with a Universal Superfour reduction drive motor. It was the task of this motor to propel not only Louise but the barge as well. This the motor did, and without a hitch over the entire stretch of 1,000 miles of difficult water, extending from Peace River Crossing on the Peace River, down the Peace into the Slave as far as Fort Fitsgerald, back up the Slave into the Des Rochers River to Fort Chipewyan on Lake Athabasca, across the lake into the Embarras River, and up that into the Athabasca River to Fort McMurray where the party entrained. For this extensive and difficult trip, fuel consumption was kept down to 300 gallons of gasoline and eight gallons of oil.

The first apparently insurmountable difficulties encountered were at the Fort Vermilion Chutes on the Peace River. This is at the great



SCALE 1 INCH = 100 MILES

Outline map of Alberta, Canada, showing the route of the Police Boat Louise during a recent trip made by the Premier of Alberta through the Northern waters of Alberta bend of the Peace River about 350 miles north of Peace River Landing. At this point the river bed is on a peculiar rock formation, the water becomes a whirlpool of rapids, and pours its way over a fourteen-foot waterfall. Louise was detached from the barge, lined over the chutes and dropped into the eddy below. Except for losing one of the rudders in the rapids when the boat struck a rock Louise came through without mishap.

Propelling the forty-foot, heavily-constructed barge over the fourteen-foot waterfalls presented a slightly more difficult job. The swiftly running water of the rapids was more than adequate for motive power. In fact, the difficulties encountered consisted of controlling and guiding the free power available. Guide lines and guy poles were used to keep the barge from crashing into the rocks. The barge very nearly broke up here due to the fourteen-foot drop that had to be negotiated. However, everything turned out well and the trip was continued down the Peace River.

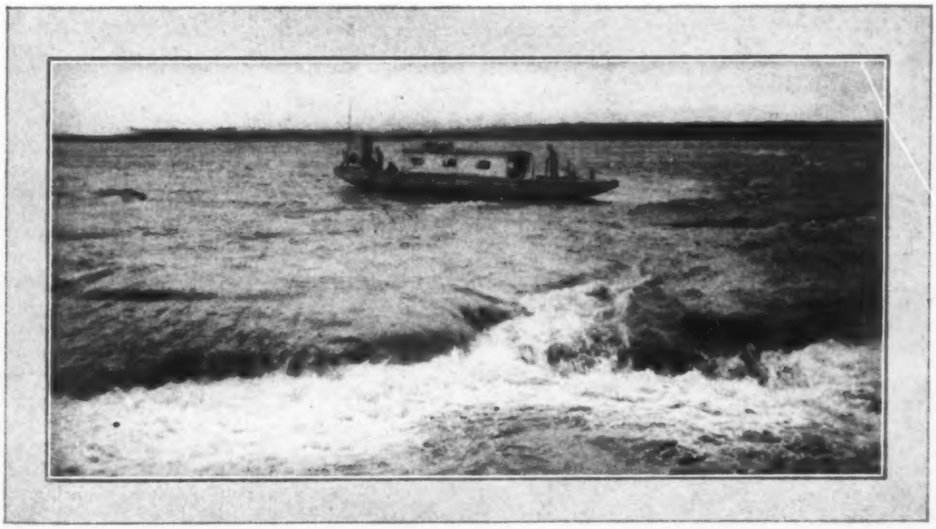
Constable Lowes, Joe La Fluer, Inspector Hancock, Constable McCarthy and Corporal McDonald

Here the party had the opportunity of enjoying a virgin country as it existed before the advent of civilization. This northern country is the fur traders' and hunters' paradise. A few mountain buffalo still survive. The caribou come in thousands every year to the great northern lakes, while the mink, marten, beaver, otter, ermine, and muskrat still abound to a considerable degree. Fort Chipewyan on Lake Athabasca was long known in Hudson Bay Company history as the great depot of the Mackenzie River district. Northern Alberta and the region farther north is the nesting ground of the migratory birds. Here vast numbers of duck, geese, swans, and pelicans, resort every year. Cranes, partridges and varieties of singing birds abound. In the rivers and lakes, pike, pickerel, white fish, and sturgeon, supply food for the natives, and the brook trout are found in the small mountain streams.

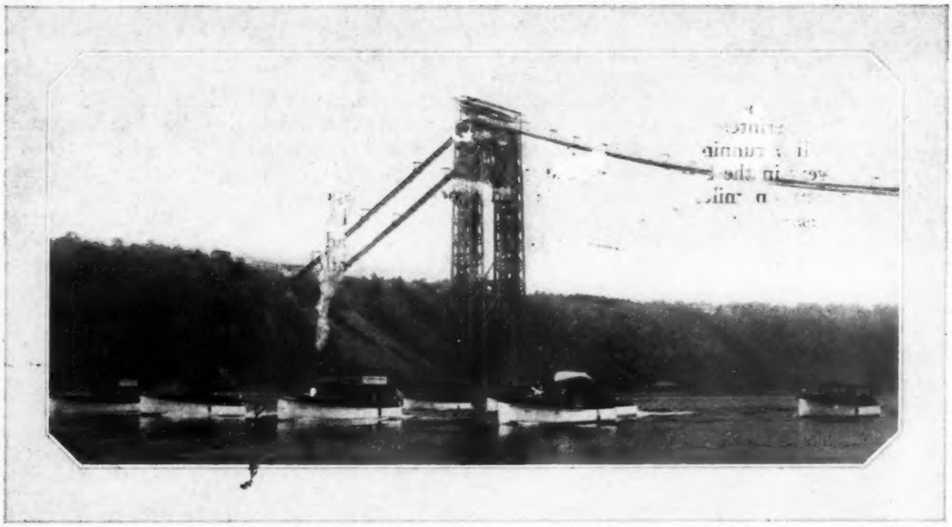
The history of Alberta partakes of all the romance with which time has so richly endowed the early days of the Hudson Bay Company and kindred bands of the old world adventurers who found the lure of the new western world irresistible. As part of the North West territories, the district of Alberta was organized in 1875. In 1905 the district of Alberta was enlarged to its present extent and the present province formed by the Canadian government.

Today Alberta has a population of 646,000 and a total area of 260,000 square miles, in other words five times the size of the state of Illinois but with only one-tenth of the population of Illinois. In Illinois the population per square mile is about 123, while in Alberta it is 2½. Over 60,000,000 acres of land in Alberta are suitable for agriculture of which 15,000,000 are now under tillage. Over 100,000,000 acres of land are as yet uninhabited except for natives and roving trappers and hunters. Alberta is, however, by no means a backward country. The coal mining and oil producing districts are the most important in Canada. Agricultural land is unusually fertile, and manufacturing is becoming of more increasing importance.

Collecting the data and making observations necessary for the purpose of the trip, the Premier's party continued its way down and up the Slave River and finally up the Athabasca River. At this point the party met another detail of the Alberta Provincial Police which was traveling in a boat also propelled with a Universal Motor. This motor has been in constant use for seven years, and has traveled for thousands of miles, and is still in good working order.



The barge going through the rapids above the chutes via fast water and plenty of rocks



M. Rosenfeld

The fleet passes under the new Hudson River bridge

FROM TONAWANDA TO NEW YORK

Eleven Owners of Richardson Cruisabouts Take Delivery of Their New Boats and Cruise Together to New York

ELEVEN new Richardson Cruisabouts, smart and gleaming with new paint and varnish, got under way from the Richardson plant at North Tonawanda one day a few weeks ago, for New York City and way stations. Eleven proud new owners caressed the steering wheels and controls. . . . some of them a bit timidly at first through inexperience, but with increasing confidence as the simplicity and ease of handling these popular one-man boats became apparent. Underneath the floor, eleven new Six-60 Grays loosened up and began functioning with the reliability which has made the Gray famous, continuing throughout the trip in cheerful responsiveness to the owners' wishes.

There was nothing cheerful about the weather, however, for conditions suggestive of mid-winter prevailed, yet aboard each craft was an unbounded enthusiasm and cheer that rose steadily in spite of the elements! This drive-away cruise was the dual idea of James Gillespie, sales manager of the Richardson Boat Company, and William Bruns, New York distributor, whose organization is responsible for the sale of the entire fleet of eleven boats. There was much to recommend it as a happy means of each owner's getting acquainted with his new boat. Not that any emergency arose requiring help from others of the fleet, but service men from the Richardson and Gray factories went along and greatly assisted in the tuning up and shaking-down process, and in addition, a jolly good time was had by all.

Speaking of the way stations between North Tonawanda and New York—these consisted largely of the 35 locks in the Barge Canal. At least I believe that 35 is the number, although I am not sure whether I did not forget to count the one where the Doctor fell overboard . . . or perhaps I counted it twice. At any rate there were enough of them and at first they provided quite an adventure. For you see, eight of the eleven new owners had had no previous boating experience, and negotiating canal locks might be considered a somewhat abrupt introduction. However, there were no misfortunes, and no untoward incidents, thanks to the ease of handling already referred to.

The fleet presented quite a picture as it got under way from the North Tonawanda plant on the first stretch to Lockport. Spectators thickly dotted the shore and seemed interested in the long line of Cruisabouts which converged at each lock passing through at the same time. The process of locking through is an old story to most of the readers of MoToR BOATING, so we will omit the detailed description.

Our log for the first day showed 78 miles behind us—not so bad after a start that was delayed until 11:30. In most places along the canal, the regulations prevent a speed greater than 8 miles an hour to prevent wash from damaging the walls of the canal.

Sunday was another cold, dreary day, and we decided to gas up before we started, and so, instead of getting under way at 8:00, we were held up until about 11:30. It was amazing the way news of the cruise spread about; we had an admiring gallery all the way along. In spite of the rain. And, in spite of the rain, too, although we covered only about 40 miles, the Cruisabouts were as gay as larks, and as comfortable as though they were at home ashore.

Thanks to a Buffalo-bound tow boat, which gave us three long and two short blasts, we were all on our [illegible] by 6:30 Monday morning. A few minutes to seven all the motors were purring like contented cats and we were off. Superintending the details of the fleet was very much like running a three-ring circus! By ten o'clock we were [illegible] Seneca River and were allowed to operate at ten miles an hour. We slid through the locks easily and then we were in Cross lake. It was a mighty good thing for us all that the Cruisabouts are so easily handled, because we suddenly came upon a Standard Oil tanker and for a while it looked as if some of the boats in the fleet would be run down.

Three of the skippers—E. Von Siefart, owner of Carefree; J. E. Gillespie, commodore of the fleet; and W. F. Cunningham, owner of Hermit II

We arrived at Three Rivers Point at three o'clock and then came the first break in the fleet. Martha left us to go through the Oswego Canal on her way to Lake Ontario and the Thousand Islands. The rest of us went on to Oneida Lake. And there the fun began! The lock tender told us there was a terrific storm on the lake and advised us to wait until the storm was over. But, though the lake looked pretty bad, we decided that if a tug and four barges could make it, there was no reason why ten new Richardsons couldn't. The first few miles were easy going, but from then on we got a beautiful trouncing! The waves were running from five to ten feet high and were as steep as the Alps. There were three or four waves to every boat length, but fortunately, we were headed into them. Everyone seemed to have a grand time, the crew sat in the stern with the curtains up and enjoyed it all. It was raining very hard, but Judge Howe, captain of Rebe H, stood up on the canopy of his boat and sang "Thank God for the Sunshine!" to the great amusement of the whole fleet. It was almost ten o'clock when we tied up at the Rome Terminal, but we had covered about 110 miles, the longest run yet, and we felt we had done a good deed well.

From then on, everything went smoothly. The skippers were learning rapidly how to catch the wind on the port quarter to help get where they wanted to go, it was easier to gas up the boats, and to lock into the locks. There were no hitches, no engine troubles, nothing to spoil the fun.

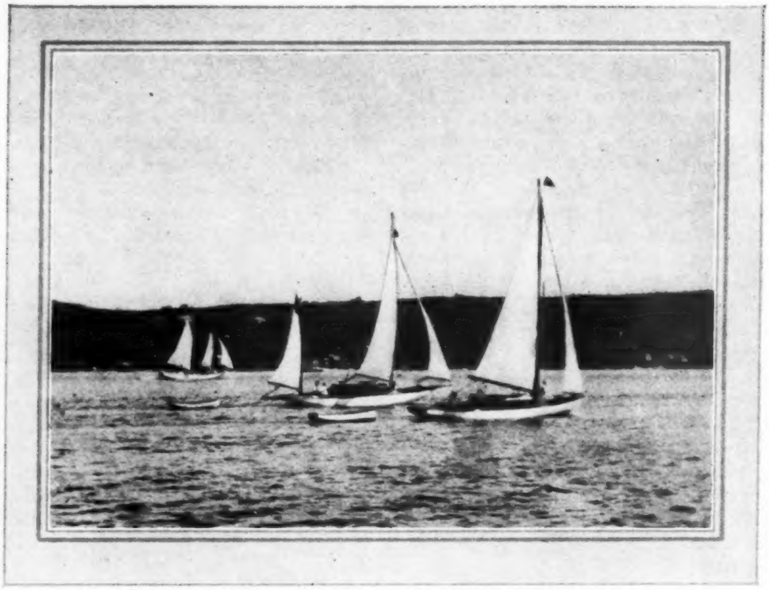
The canal winds through the valleys and every time we were headed northeast or southeast, we were subject to a [illegible] touch of winter. However, all the boats had the stern and windward curtains lashed down and were having a delightful time.

Tuesday was dreary and blustery and we got under way about ten o'clock. About two miles below Little Falls lock we met the A.C.F. 40-foot cruiser Easy Going bound for Cleveland, Ohio. The sun came out and the weather warmed up considerably and it began to look as though we might get some nice weather for the rest of the cruise.

We tied up for the night at Canajoharie Terminal. Some of the Cruisabouters went up to town after dinner and returned just in time for the excitement which happened about nine o'clock. The crews were enjoying life on their boats when they were disturbed by five short blasts on an air horn. This meant very little to any of them and it was quickly followed by five more short blasts. Finally a search light was spotted on the boats and the fleet in general was cussed out as only the captain of a Standard Oil Barge can cuss. This was the first Standard Oil Barge to stop at Canajoharie for more than a year . . . still we were cussed by the skipper for mooring our boats the whole length of the dock. We proceeded to take the Cruisabouts as fast as pos-

(Continued on page 90)

All lined up at the Richardson plant at North Tonawanda preparatory to the start



For it's always fair weather when good fellows get together

THE CANADIAN YACHTSMAN'S PARADISE

Hundreds of Miles of Pleasant Waters on the Saint John River in New Brunswick the Scene of Camping and Cruising

By GRACE E. P. LEONARD

THE Saint John River in New Brunswick is a perfect paradise for the yachtsman, running as it does with its many tributaries, almost throughout the entire province. There are hundreds of miles of waterways accessible to pleasure craft of every size and kind, and the scenery is beautiful beyond description. Even the climate of this province down by the sea is so cool and exhilarating, clear sunny days, and nights cold enough for an extra blanket even in July and August, so that yachting and motor boating, canoeing and camping are carried on with delight by those fortunate enough to be footloose and free for any length of time.

The Royal Kennebecasis Yacht Club has its home at Milledgeville on the Kennebecasis River, one of the beautiful tributaries of the Saint John, only three miles from the old Loyalist city of Saint John; so that Fundy's cooling breezes prevent any excessive heat, and Fundy's fog sometimes drifts that way. But an occasional foggy evening is very refreshing after a hot day on the river, and The Bay of Fundy fog is a famous beautifier to which the complexions of Saint John girls will testify.

During the early days of spring and summer there is much activity around the Club house at Milledgeville, where the yard is full of boats that have been pulled up on the marine railway for the winter. Canvas covers are removed and sails are shaken out and aired, hulls and cabins are scraped and painted and varnished, and engines and masts are overhauled. But the first of June usually finds a shipshape and glittering fleet, all at their different moorings in the harbor in front of the Club House, and in commission for a summer of happy days. For the slogan of the R. K. Y. C. has been for many years, Happy Days, a phrase that has well justified its existence, for no one who has ever sailed on a R. K. Y. C. cruise but will tell you that when the yachtsmen say Happy Days, they mean that literally.

Many of the yachtsmen are descendants of sea-faring men from the port of old Saint John, so the call of the sea is in their blood. And while they do not make their living that way now they are fine sailors nevertheless, and take a wonderful pride in their yachts, and a trimmer, better kept squadron could not be found the world over.

The Royal Kennebecasis Yacht Club is one of the few yacht clubs in Canada to be privileged to append Royal to its name. And as this is granted by royal charter from his Majesty the King, by Admiralty warrant, it is an honor to be proud of; and those yachts that are registered and so permitted to fly the blue ensign, or the Blue Peter, as the boys love to call it, are very proud of this distinction.

The annual cruise of the R. K. Y. C. starts about the middle of July each year, always on a Saturday, and is one of the most eagerly awaited events of the summer. Some of the yachts have been on the river over thirty years, and many of the captains and crews sail on the same boats year after year. It lasts only a week and a day but is simply crammed full of good times and every year seems better than the last. This annual cruise is always ended by a church service on the shore the second Sunday out, and hundreds come to join the fleet in this service, by boat and auto and steamer, for it is a beautiful sight to see all the gaily decorated yachts, for as the fleet lies at anchor there the order always goes out from the flagship to Dress Ship. The yachtsmen appear in their white flannels and blue coats, the ladies and children in their gay summer attire, the sandy beach with its old shady trees where the choir and orchestra as well as the preacher, the Chaplain of the Club, assemble right on the beach. The Club is always glad to welcome visiting yachts on their cruise, and often send invitations to other yacht clubs, and American yachts frequently join them.

The annual cruise is a wonderful time for reminiscences and a get-together of all the old timers. A time for yarns and feasting and a renewing of old friendships and the forming of new.

This year the flagship was a schooner, Katrina, with Commodore Whelpley in command. A lazy sailor is Katrina in a light breeze, but give her a good blow and the schooner can show her heels to the best of them. Her cabins are spacious and there is so much deck room that sometimes a dance is held aboard.

Some of the smaller craft are fleet in any wind, Raven, Mist, Canada, Syce, Gracie M., Wanderer, Rena, Villian, Smoke, Old Glory, Savitor and many others with picturesque names, are like beautiful birds of passage, ready to flit at the first whisper of a breeze in the rigging. Last year Osprey was always spoken of as the yawl, but this year another yawl, Nemac, shares the honors with her.

This summer the squadron got away on the thirty-fourth annual cruise from the club anchorage at Milledgeville on the afternoon of July 20. Promptly at 2:30 P. M. the cannon from the flagship announced that Happy Days had begun. The yachts carrying full sail in a light breeze floated along the river looking so graceful with their big spread of canvas dazzling white in the sunshine. Out of the Kennebecasis into the great Saint John. On up through Grand Bay with the clustering houses and camps of the summer colony nestling along its shores. Past pretty Westfield with its beach and tennis courts and beautiful golf course laid out on the hills in full view of the river; and rounding Pancake hill into the Long Reach —twenty miles of straight-away sailing with good water all the way, surely the fulfillment of a yachtsman's dream.

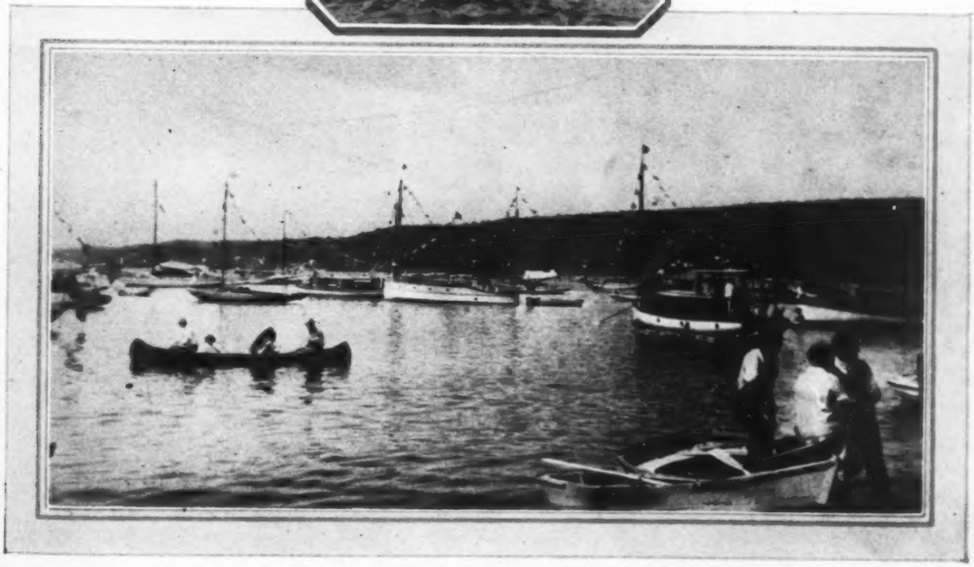
The rendezvous for the first night was Carter's Point, and when the colors came tumbling from the mastheads at the sunset gun, there were over thirty yachts anchored in the still waters of the cove. There was a representative showing of motor boats along, for a good many of these now belong to the R.K.Y.C., and they are very often useful members of the fleet; for when the wind dies away on a summer afternoon, tow lines from the motor boats gladly bring the yachts home to their destination in time for tea.

There were many parties on board the different yachts that night and it was a wonderful evening. Bright moonlight, the moon overhead, and still water below. The riding lights at the mastheads reflected in the calm surface of the harbor. Just about dusk one of the sea planes of the Saint John Flying Club came circling overhead, and then floated gracefully down and came to anchor among the yachts for the night. A different kind of craft for the old R.K.Y.C. to harbor, but welcomed gladly as the fore-runner of modern times.

The first night out it is always fun to watch the juniors and new members of the Club trying so hard to make their language strictly nautical, as they speak causually of going to windward or leeward,

(Continued on page 74)

Club House at Milledgeville



Yachts on the cruise gathering for the service at Carter's Point

The new Sunshine cruiser is only 25 feet long but has unusual accommodations

A SMART 25-FOOT COMMUTER

New Product of the Seawood Corporation Has Unusual Features

LATEST and most notable contribution to boat lovers is the release of the new Sunshine Cruiser, a 25 foot cabin commuter of unusual hull design.

This new boat is the product of the Seawood Corporation, New York; and represents six years of intensive study, comparison of hull designs, experiment and test by L. F. Wood, who has labored continuously during this time to produce a boat that embodies appearance, comfort, speed, economy and seaworthiness.

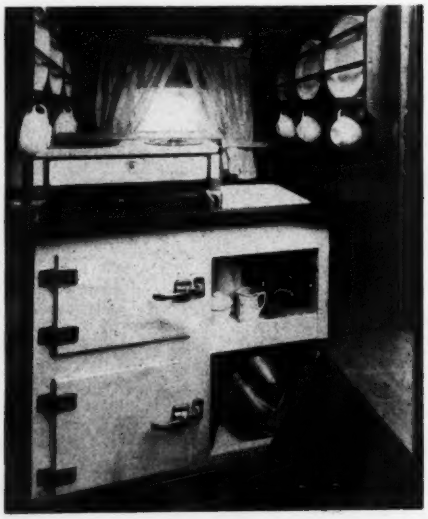
A glance at the illustrations will show how well Mr. Wood has accomplished his aim, for the boat is distinctly up to the minute in appearance; with forward cockpit, low cabin trunk, raised bridge deck and depressed after cockpit. With her power plant a 75 h.p. 6-cylinder engine, she develops the rather surprising speed of better than 20 miles per hour.

The forward cockpit is comfortable, seats two people, with streamline automobile-type windshield. The boat is self-bailing, and entrance to the cabin is by double-doors of liberal width.

With headroom of 5 feet 8½ inches, unusual for a 25 foot boat, the cabin contains two berths, 6 feet 2 inches long, of ample width, upholstered in tapestry over curled mule hair and Marshall springs. Aft of the cabin on the port side is the toilet, with white-enameled sanitary fittings; to starboard is the galley, with 2-burner stove, enameled sink, ice-box and dish compartment. Two easy steps lead aft to the raised bridge deck; protected by a large streamlined plate-glass windshield; equipped with mahogany steering wheel, spark and throttle controls and an instrument panel containing tachometer, ammeter, oil gauge and motor temperature indicator.

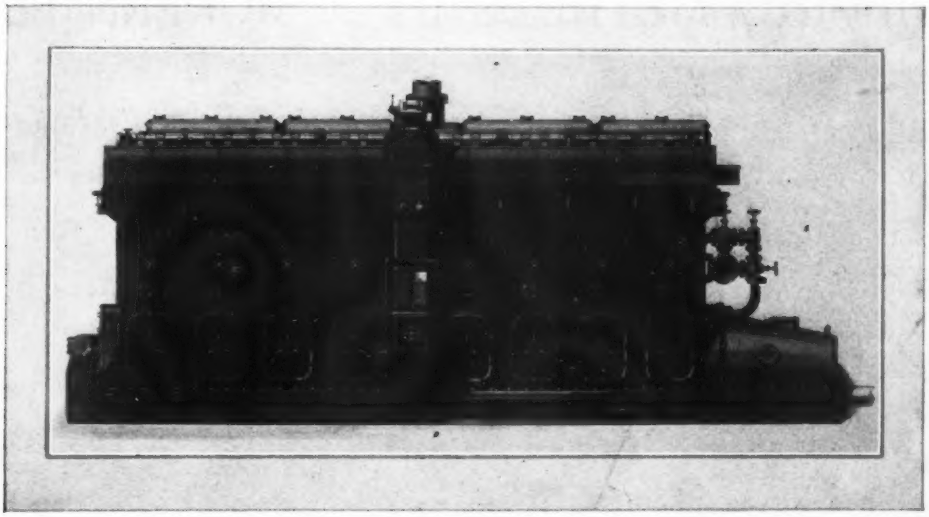
At the aft end of the after cockpit are two wicker chairs, normally facing forward but reversible for fishing. The Sunshine Cruiser is unusually well adapted for this purpose, as the complete absence of top-hamper makes it easy to handle a rod in any direction, no matter where tarpon, bluefish or sailfish may dart.

A striking feature of the design is the impression of size and speed which one gains when viewing the boat from any angle. Sunshine is not a cut-down cruiser, nor an over-developed runabout, but a highly-perfected boat which gives the advantages of both types. With a very respectable turn of speed, and the open-air features of the runabout, she combines the living accommodations of a cruiser, in which a party may live all summer. Her equipment is complete including all galley gear besides the usual deck equipment.



The galley with built-in ice box and stove, etc., is on the starboard side aft

Comfortable tapestry cushions are arranged on the two berths in the cabin



Operating side of an eight-cylinder Cooper-Bessemer reversible diesel engine

IMPROVED DIESEL ENGINES

Large Six and Eight-Cylinder Diesel Engines Developing Over 1,000 *H.P. at Slow Speeds Embody Many Recent Improvements in Design*

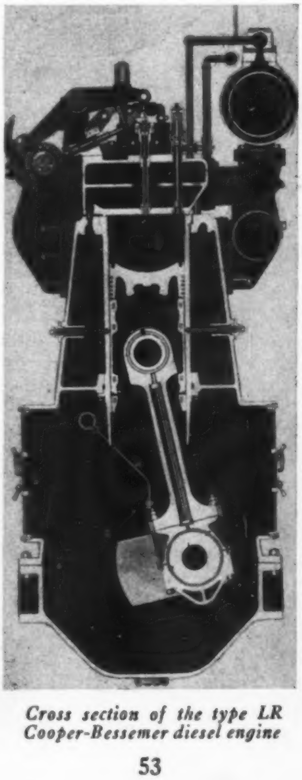
THE Cooper-Bessemer Corporation has announced its improved 1930 line of Type LR Diesel Engines which are being widely used in all types of marine service.

These are four-cycle engines built in three, four, six and eight cylinder types, embodying the latest in proven design both in this country and abroad. Like all of the Cooper-Bessemer line, these LR engines are noteworthy for their simplicity, accessibility, ease and quietness of operation. While built in the four models listed above, the three and four cylinder units are built in generating sets only.

The LR engines are 16 inch bore by 20 inch stroke, the six cylinder engine developing 650-800 h.p. and the eight cylinder engine developing 900-1,060 h.p. at 250-300 r.p.m., depending on whether equipped with grey iron or special alloy pistons.

The base is of semi-steel made in two sections which are firmly bolted together, with extra heavy boxing under each bearing. It is of rugged design and arranged with outlets for draining all lubricating oil.

The crankshaft, the backbone of any engine, is extra large and overstrength, built to Lloyd's and A. B. S. standards. It measures 11¼ inches in diameter and is forged from a solid billet of .30-.40 carbon steel, annealed, rough turned, heat treated, seasoned and precision finished. It is finished all over and drilled for force feed lubrication.



Cross section of the type LR Cooper-Bessemer diesel engine

Bearings are extra large to insure long wear; the main and crank bearings are of cast steel with centrifugally cast babbitt scraped to running fit. The wrist pin bearings are of solid phosphor bronze, scraped, fitted and trued with mandrels and stand, and checked by micrometers.

The centerframe is of the water-box type of semi-steel with ample cross-section construction. It is fitted with nickel steel removable liners ground to automobile finish, and fitted with stuffing box at bottom.

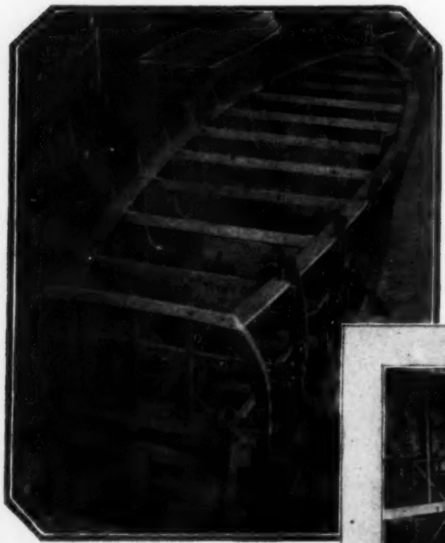
The cylinder heads are of a special Cooper-Bessemer design fitted with dual intake and exhaust valves, air starting valve and injection valve. The dual valves give ample air and quick clearance of exhaust gases and also allow the maximum amount of metal between openings in the head. Water circulation between the head and centerframe is at four points 90 degrees apart, giving perfect water circulation and heat distribution.

The dual exhaust valves are in easily removable cages—water cooled, and the dual intake valves are also in cages, and are interchangeable. The exhaust valves are of one-piece

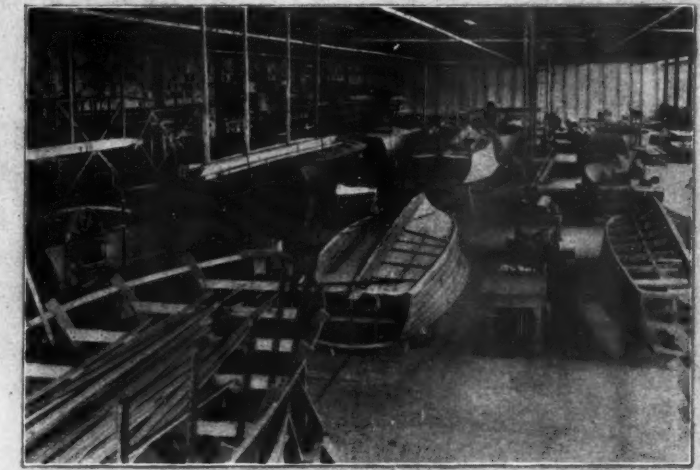
(*Continued on page* 132)

BUILDING METHODS IN A MODERN PLANT

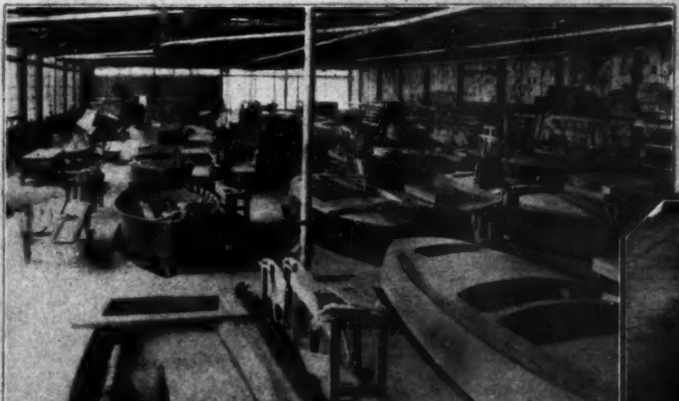
Layout of the New Gar Wood Plant
at Marysville, Michigan
Scientifically Planned for Fast
and Efficient Production



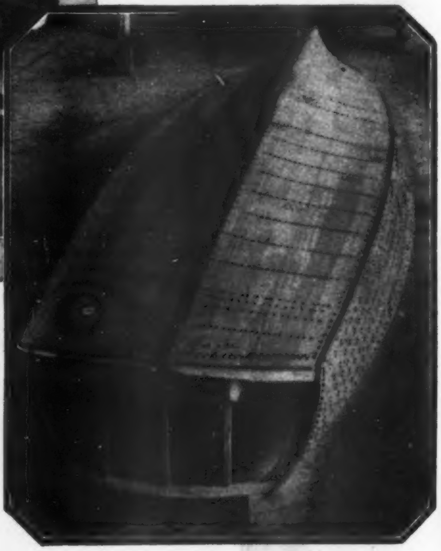
The beginning of the production line. One of the 22-footers in frame in the framing stall, ready for the application of side planking



A general view of the first 70 by 240-foot hull assembly room where five separate assembly lines are in continuous operation



Looking back on the first section of assembly lines. Wells in the floor bring the hull down to a convenient height for decking and hatch framing operations

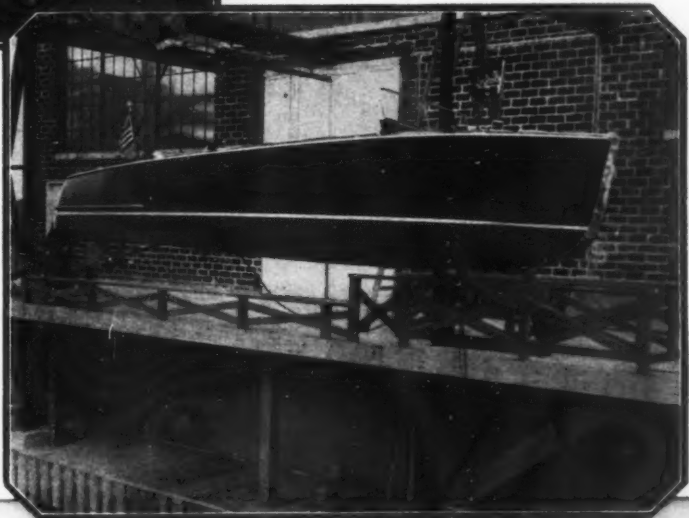


A 22-footer, planked and plugged, ready for planing and sanding, which are done by hand by highly skilled workmen

AND SOME OF THE RUNABOUTS PRODUCED

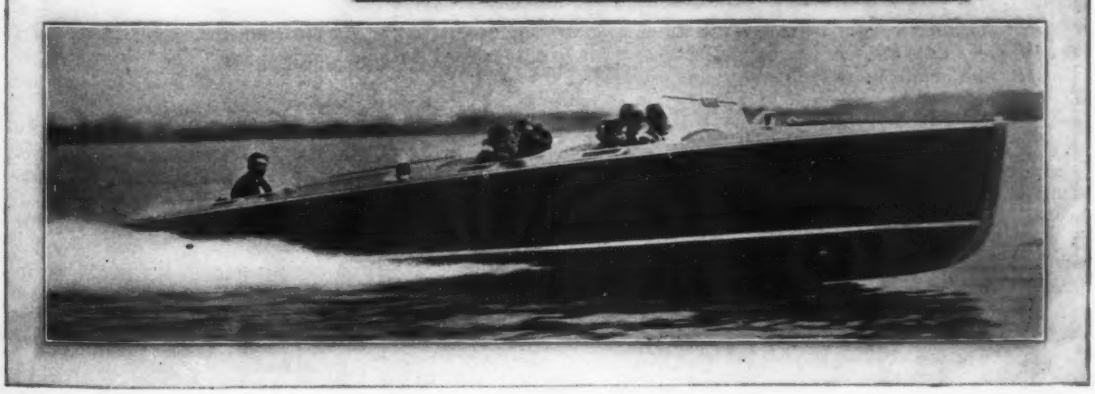
The five 550-foot production lines accommodate 72 boats at a time. Note at lower right the finished hull on electric conveyor hoist ready for launching

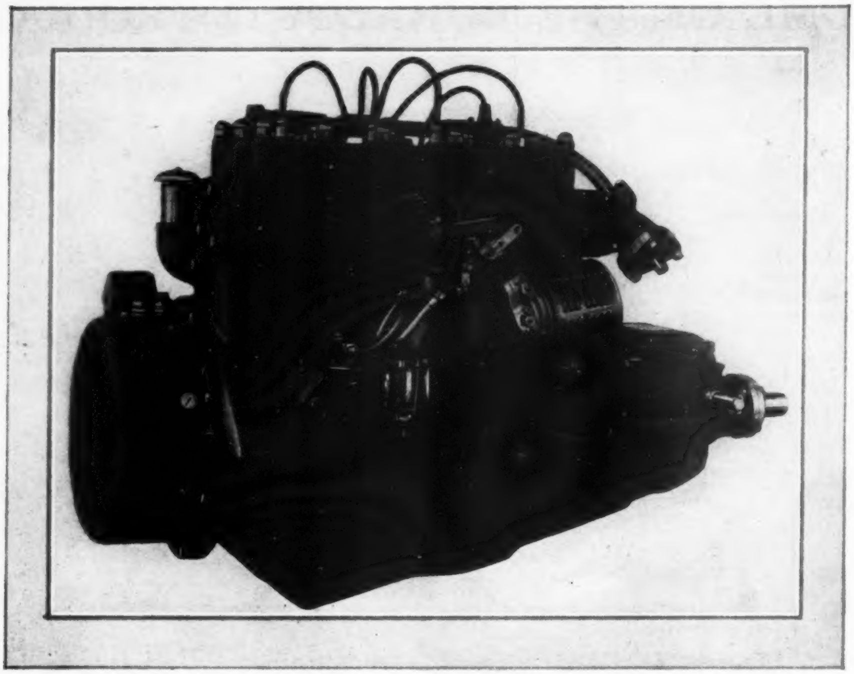
A glimpse into the forward cockpit of a 28-40, showing the wheel and instrument panel. Those little buttons and levers control the power of a 200 h.p. Scripps



All finished and ready for launching. The conveyor has brought this runabout from the production line and lowers it directly into the water

And finally, the thrill of a spin at 42 m.p.h. in one of these fine mahogany water runabouts. A happy group of passengers try out a 28-40 on the St. Clair River





The new model UA 40 h.p. Lycoming marine engine has many novel features of design

A JUNIOR RUNABOUT ENGINE

New Light Weight High Speed Lycoming Engine Designed and Built Particularly for the New and Popular Classes of Small Runabouts

THERE has long been a distinct gap between the outboard powered hull, and the larger standardized boat equipped with inboard engine and automobile type of control. As the popularity of motor boating increased, it soon became apparent that a small boat in the intermediate class would supply an existing demand.

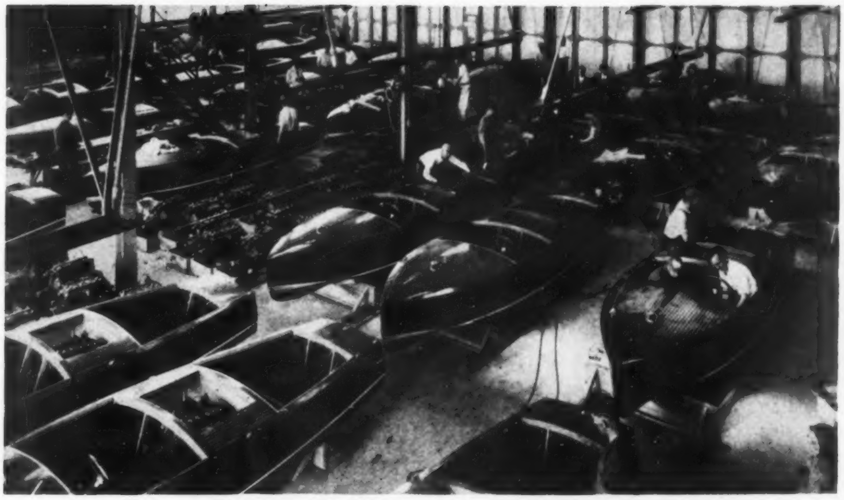
While boat builders have long realized that an unusually large number of small standardized boats would find a ready market, they have been unable to offer them by reason of the fact that suitable engines were not available. After making a careful survey of the potential market, the Lycoming Manufacturing Company, for many years builders of fine motors for automotive and industrial uses, became determined to use its vast resources to design a motor especially for use in the type of boat that will probably become generally known as Junior Runabout. The result of many months of painstaking effort, the model UA Lycoming Marine Engine fulfills all the requirements of a small, light weight, high speed engine. It is completely equipped with every necessary accessory heretofore found only on the larger and more powerful marine units. Built-in reverse gear, electric starter, oil cooler, flame arrester, tachometer takeoff, thermo gauge connection, mechanical fuel pump and other necessary features are incorporated in the design and regularly furnished as standard equipment.

The engine is designed especially for the severe duty encountered in marine service. Each feature of the design was adopted only after most exhaustive tests in the company's research and experimental laboratory. Every part entering into the construction is manufactured on special jigs and fixtures, assuring accurate fits and perfect interchangeability. Every completed engine is given a test run during which it must develop its full rated horsepower and must come up to the exacting standards specified by the engineering staff. After its test run the motor is partially dismantled for final inspection. The oil pan is removed, bearing caps are taken off and bearings are examined to guard against failure in service.

The bore of the engine is 3⅛ inches and the stroke is 3⅞ inches, giving a displacement of 119 cubic inches. The horsepower rating is 40 at 3,200 r.p.m. with a compression ratio of 5.5 to 1.

A unique feature of model UA Lycoming Marine Engine is its compact design. This is made possible by incorporating the exhaust and intake manifolds in the cylinder block casting, and by using a single unit 12-volt starter-generator mounted on the front of the engine in the position usually occupied by the flywheel. The armature of this apparatus being of large diameter, it takes the

(*Continued on page* 80)



A view of the department where motor installations are made

A VISIT TO THE NEW DODGE FACTORY

Editors of Boating and Automotive Magazines Inspect Newport News Plant With Eastern Dodge Dealers

A GROUP of editors of motor boating and automotive magazines and Dodge distributors and dealers from all over the eastern United States boarded three special Pullman cars at the Pennsylvania Station, New York, on May 19, for a visit to the new $2,000,000 manufacturing plant of the Horace E. Dodge Boat and Plane Corporation, at Newport News, Virginia, which opened for operation on March 13.

Completed boats lined up and ready for tests on Hampton Roads and the James River

The party was led by Kenneth M. Smith, director of sales of the Dodge company, and was met at Old Point Comfort by J. Gilmore Fletcher, managing director, William M. Horn, general manager, and other Dodge officials. The entire party was transported to Newport News from Old Point Comfort in a large fleet of motor cars, returned to the Chamberlin-Vanderbilt Hotel at Old Point Comfort for luncheon and

(*Continued on page* 82)

The group of editors and Dodge dealers who inspected the Dodge plant

M. Rosenfeld

A HALF CENTURY OF BUSINESS

Old Established Marine Hardware Manufacturing Firm Can Trace the History and Development of Boating for Sixty-one Years

PROBABLY no man has seen greater changes take place in the marine hardware industry than William Walter Wilcox, president of Wilcox, Crittenden & Co., Inc., one of the world's largest manufacturers of marine hardware. Mr. Wilcox's first direct contact with the boating business began more than half a century ago . . . when as a boy he spent two summer vacations traveling by water and land with his uncle, Albert R. Crittenden, from New London, Conn., up the coast to Halifax, Nova Scotia and around through the Maritime Provinces, calling on all sail-lofts and hardware stores.

Blank & Stoller, Inc.

William Walter Wilcox, president of Wilcox, Crittenden & Co., who has devoted a lifetime to the manufacture of worthwhile marine fittings

In a recent interview, Mr. Wilcox reminisced most interestingly . . . sketching in his inimitable manner the customs and methods of doing business in their field a half century ago when, as a boy, he began absorbing the lore of ships from his uncle and his father.

"In the summer of 1876" said Mr. Wilcox, "you can well imagine the thrill that, as a lad of 14, I experienced when one day my father and my uncle apparently decided that William was old enough to enter the University of Boating. I well remember the evening my father told me that I was to go along with my uncle on his long trip up and down the coast. And what a glorious introduction into the business that summer proved to be.

"Business was on a much more personal basis in those days. My uncle knew all his customers intimately. His calls at the sail-lofts which dotted the harbor towns of those days were as much social events as they were business contacts. Invariably we were received as honored guests and invited to the customers' homes. Business was discussed only after the social ceremonies were completed. My uncle was a great favorite everywhere with the trade. He liked people . . . and they liked him. And many of these customers would no more think of placing their orders with anyone but my uncle than they would think of putting out to sea in a badly listing boat.

"The chief customers of Wilcox, Crittenden & Co., in those days, shortly after the Civil War, were the owners of sail-lofts and boat yards who built mostly work boats, sloops and schooners. In the early days there were no such things as standardized boats. The business was with individual boat builders who turned out what might be called hand-made boats. Equipment for clipper ships in particular was a large factor.

"To these early builders staunchness was the first requisite. They knew that human life was often saved by the dependability of the marine hardware used in building their ships. The founders of our business always insisted upon making Wilcox-Crittenden fittings as strong as humanly possible. No effort or expense was spared. Naturally, the boat builders of those days looked with great favor upon Wilcox-Crittenden fittings. Today staunchness still is the first requisite of Wilcox-Crittenden hardware.

"Our business began with the manufacture of grommets. My father invented a three-part brass grommet which was a tremendous improvement over the original sheet brass washer grommet and this really marks the beginning of our business.

"Following the introduction of the three-part grommet we invented several other articles including principally the patented spur grommet. This latter was so superior that not only did it meet the approval of the U. S. Navy but later was adopted as standard by the British Admiralty."

Mr. Wilcox paused and looked thoughtfully out of his office window and across the street to a point just beyond where the company is now erecting a large new building to supplement its present production facilities.

"One of the factors contributing to, the steady growth of the marine hardware business" Mr. Wilcox said at length, "is the irresistible lure of boating to almost everyone . . . even to those to whom nautical terms might as well be Sanskrit for all they convey in meaning. And this love of the water inherent in most of us is plainly evidenced today by the thousands of yacht clubs located all over the country, wherever there is a sizable body of water.

"During my earliest experiences with marine hardware, business was done mostly along the coast and the Great Lakes. My father, William Walter Wilcox, was born in Middletown, Conn., May 23, 1825 and was one of the founders of the business. He began as an employee of Ira K. Penfield in 1847, with whom he entered into

(*Continued on page* 84)

WIDOW—ANOTHER EASY ONE

A Simple Twenty-Foot Runabout of the Flat Bottom Type Equipped With the New Inboard Outboard Drive With Engine in the Stern

Designed Especially for MoToR BoatinG

By WILLIAM ATKIN

Part II

SOME one has asked me for a list of the tools required for building a small boat. Well I'll tell you what one of my workmen tells me. He says when you start out to build a boat all you require is a saw, hammer, and a few drills with a brace for turning them; but by the time the job is finished you will have a big chest full of tools including everything from an electric drill to a brad awl. In other words as the job gets along you will become more and more interested and will be forever buying new tools. We all do it. For myself I started with a few hand tools and to date have a power band saw, table saw and lathe set up in the cellar workshop and all I need now is a jointer and then a larger cellar. That is the way it goes.

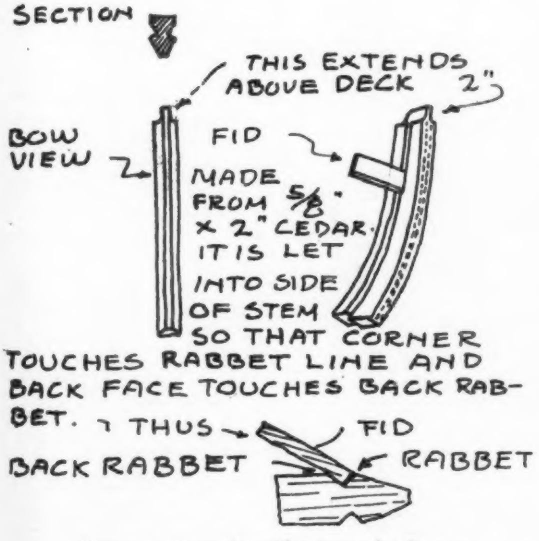

SECTION
THIS EXTENDS ABOVE DECK 2"
BOW VIEW
FID
MADE FROM ⅝" × 2" CEDAR. IT IS LET INTO SIDE OF STEM SO THAT CORNER TOUCHES RABBET LINE AND BACK FACE TOUCHES BACK RABBET.
THUS
FID
BACK RABBET
RABBET

Figure 1. How the rabbet is cut in the stem

Now to get back to Widow. After the lines have been laid down the first thing to be made is the stem; this shown in Figure 1. The stem will be cut from 1¾ inch thick white oak; mahogany can be used for this or hackmatack. It will be 3 inches fore and aft. The rabbet line and back rabbet must be drawn on both sides as indicated in the sketch. Now take a piece of the lumber from which the planking will be cut; this should be about six inches long and two inches wide the ends must be perfectly square. This piece is called a fid. To get the correct bevels of the rabbet the fid is notched into the stem in such a way that the outside corner of one end touches the rabbet line and the back face touches the back rabbet. It is evident that as the back rabbet line and the rabbet line converge that the bevel will be more abrupt. Leave plenty of length at the head of the stem from which to form the nub. Also allow for the cuts in the foot for the reception of the bottom planking.

The stern board will be made next. Details of this are shown in Figure 2. The planking for this will be made from ¾ inch thick mahogany or white cedar and the several cleatings around the edge from ¾ by 2 inch oak. The piece up the center will be made from ¾ by 8 inch oak. This should all be fastened with screws throughout. The seams will be backed with battens similar to those on the side planking. The stern should be especially well made and fastened because it carries the outboard gear box and propeller. This device serves as an outside knee, having a bronze plate that extends for some distance along the bottom forward of the stern board, so you can depend on this rather than a knee inside.

The side planking will be made from ⅝ inch white cedar having the seams backed with battens made from ⅜ by 2½ inch white oak. There will be three strakes on each side; use 1⅛ inch brass screws for fastening the planking countersinking the heads and covering these with wooden boat plugs. The screws that go into the battens should be 1 inch in length. Figure 4 give a picture of the inside of the planking showing the side frame, battens, chine piece, shelf, etc. The joints between the strakes should be fitted tight and are not to be caulked or puttied. Just apply a coat of rather thick paint on the batten as the strakes are being fastened along the seam.

The chine logs will be made from ¾ by 2 inch white oak and must be in a single length. At the bow these must be let into the stem first cutting down their

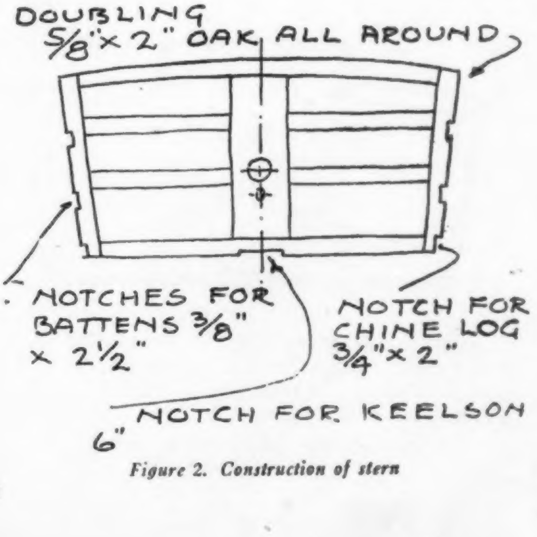

DOUBLING ⅝" × 2" OAK, ALL AROUND
NOTCHES FOR BATTENS ⅜" × 2½"
NOTCH FOR CHINE LOG ¾" × 2"
NOTCH FOR KEELSON 6"

Figure 2. Construction of stern

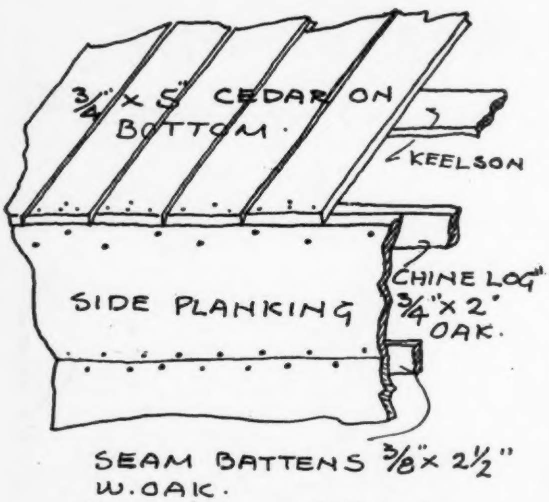

3/4" x 5" CEDAR ON BOTTOM.
KEELSON
CHINE LOG 3/4" x 2" OAK.
SIDE PLANKING
SEAM BATTENS 3/8" x 2½" W. OAK.

Figure 3. Showing cross planking on bottom

thickness one half. It is always good practice to thin down the ends of all battens, clamps, chine logs or other longitudinals; the ends then bend into a better curve. At the stern the chine logs are let into the cleating as shown in Figure 2.

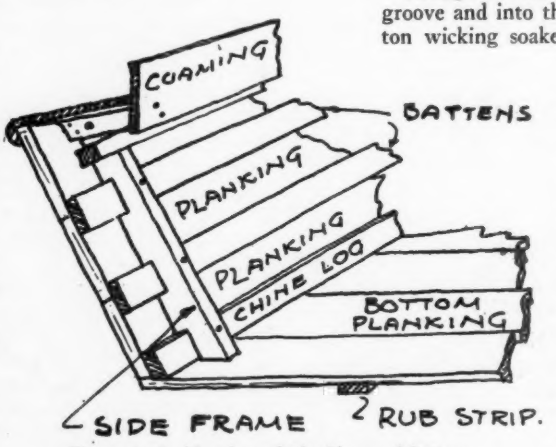

COAMING
BATTENS
PLANKING
PLANKING
CHINE LOG
BOTTOM PLANKING
SIDE FRAME
RUB STRIP.

Figure 4. Inside view of planking and battens

A boat of this kind should be built over forms and bottom side up. The forms will be made from ¾ inch spruce as indicated in the sketch, Figure 5. Notches must be cut to take the keelson, the chine logs, and the battens. The position of these will be taken from the laying down plan. Full particulars for laying Widow down were given in the last number. The forms must be well stayed to the floor as shown in the sketch.

The keelson will be made from ⅝ by 6 inch white oak and will be fitted into the notches in the forms. Forward it must be let into the foot of the stem; and aft into the cleating on the stern board. Temporary fastenings will be used into the forms. In building a skiff the keelson is sometimes put on the outside of the bottom; I would rather have it inside on this job.

The bottom planking will be made from ¾ inch white cedar. Now do not use wide stuff; 5 inches is the maximum that should be used. I know nearly all boat builders slap on wide planks on the bottom of any boat that is cross planked. Then after the thing has been in the water for a few days the wood swells and having no place to go buckles. With the result that the boat leaks along the chine.

I see this kind of thing every day. The result is the boat has to be hauled up and the bottom relaid. Another thing do not jamb the bottom joints too tight. There must be a slight outgauge in the seams, leaving the bottoms of the seams tight and the top open. Cotton wicking will be rolled this V, using only two or three strands. The best fastenings are brass screws and these should be spaced not more than 2 inches center to center.

Along the chine you must cut a shallow groove and into this lay a few strands of cotton wicking soaked in wet paint. There is nothing like using paint or waterproof marine glue between all surfaces that come together in boat work. Figure 4 gives a very good idea of the way the bottom planking should be laid and finished. The two rub strips will be made from 7/8 by 2½ inch white oak; these two members, however must not be fastened until after the bottom has been planed off, caulked, payed and puttied. Then fasten with brass screws driving these from the inside through the cedar and into the oak. Better drive at least three screws to each plank.

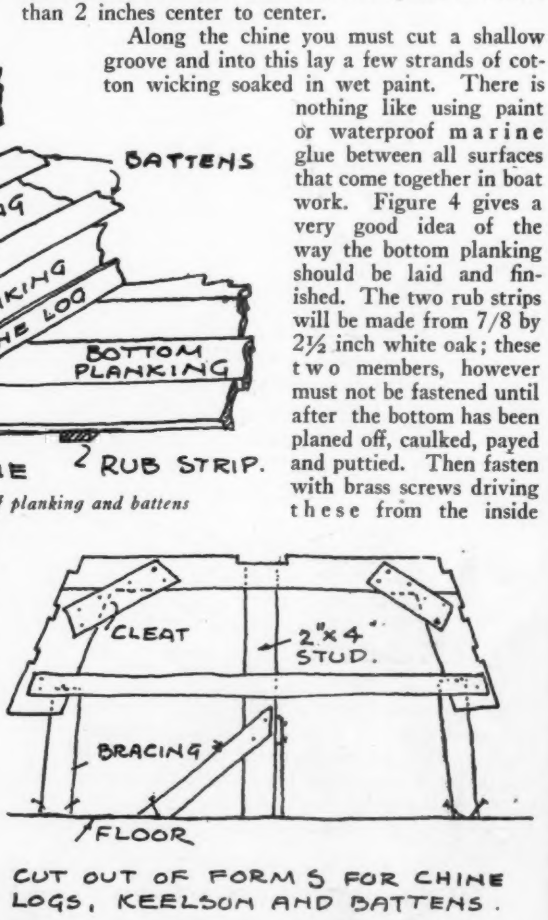

CLEAT
2" x 4" STUD.
BRACING
FLOOR
CUT OUT OF FORMS FOR CHINE LOGS, KEELSON AND BATTENS.

Figure 5. Building forms made from ¼ by 4 inch spruce

The side frames will be made from 1⅛ by 2 inch white oak; these will be set on the same centers as the stations, that is 30 inches. There will be a bulkhead on the forward side of the frame at Station 2; this to be made from good grade of plywood 5/6 inch in thickness. You will require a nailing piece across

(*Continued on page 76*)

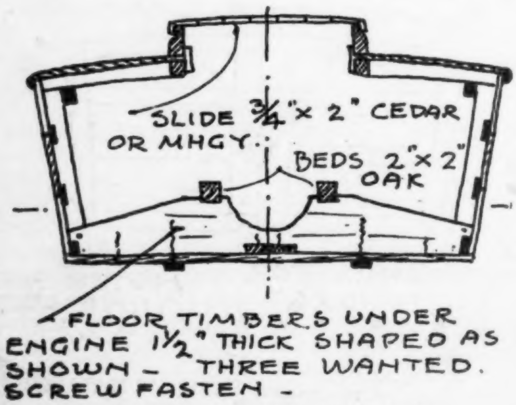
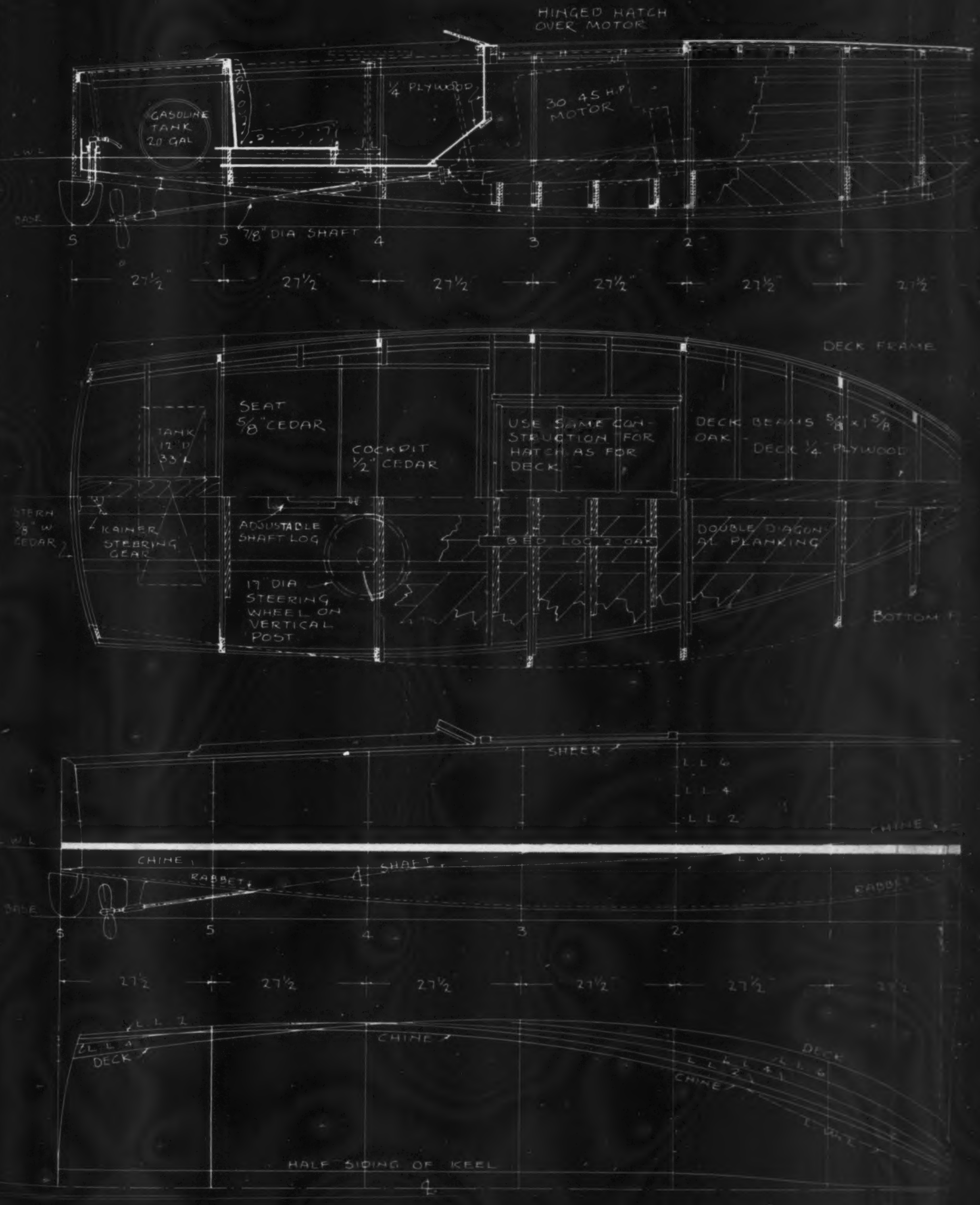

SLIDE 3/4" x 2" CEDAR OR MHGY.
BEDS 2" x 2" OAK
FLOOR TIMBERS UNDER ENGINE 1½" THICK SHAPED AS SHOWN - THREE WANTED. SCREW FASTEN -

Figure 6. Section through station 6 showing engine beds and sliding hatch

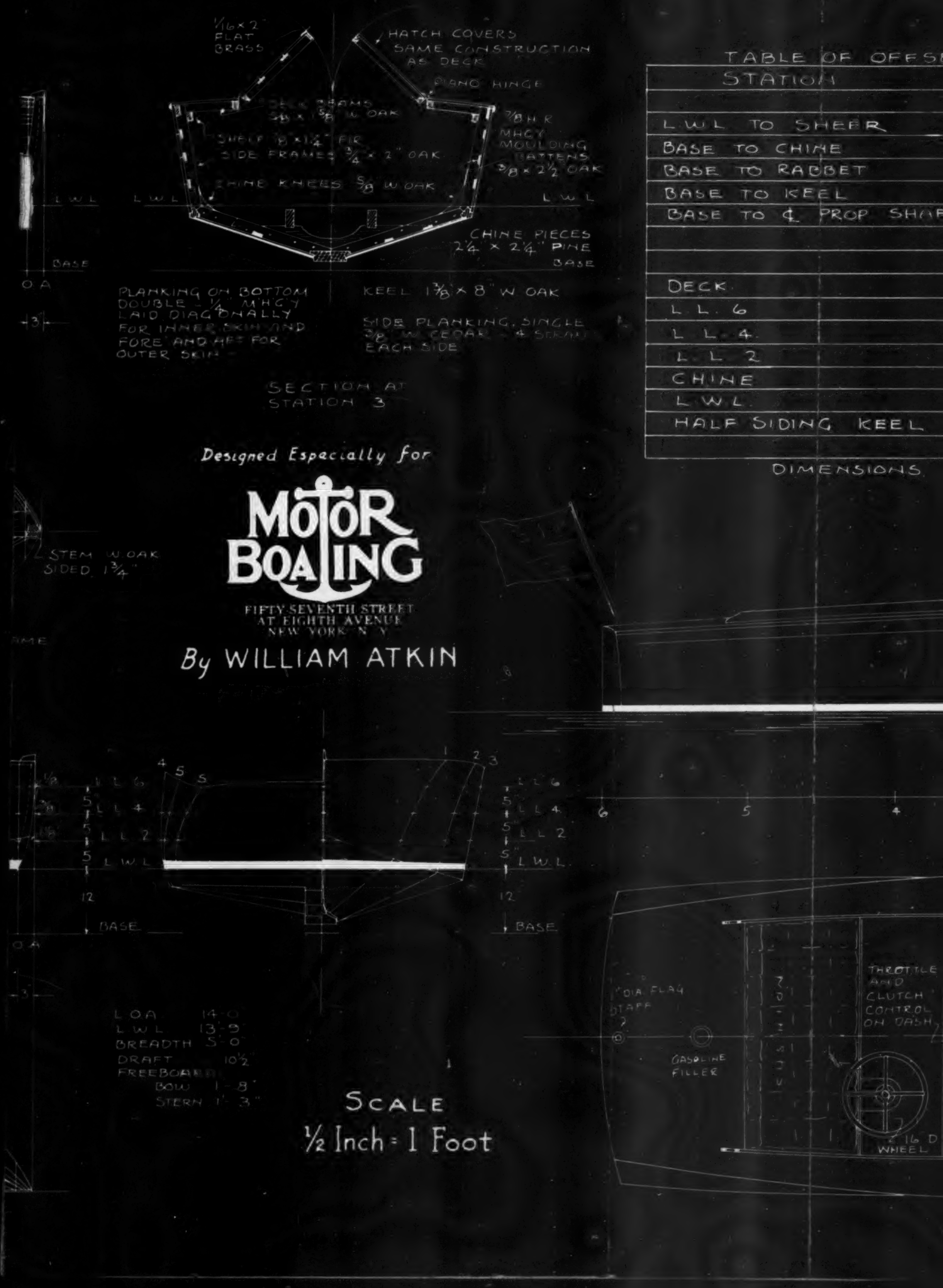
MOTOR BOATING'S Build


HINGED HATCH OVER MOTOR
GASOLINE TANK 20 GAL
1/4 PLYWOOD
30 45 H.P. MOTOR
L.W.L.
BASE
7/8" DIA SHAFT
5
5
4
3
2
27½"
27½
27½
27½"
27½"
27½"
DECK FRAME
SEAT 5/8" CEDAR
TANK 12" D 33" L
COCKPIT 1/2" CEDAR
USE SAME CONSTRUCTION FOR HATCH AS FOR DECK
DECK BEAMS 5/8" x 1 5/8 OAK
DECK 1/4" PLYWOOD
STERN 7/8" W CEDAR
KAINER STEERING GEAR
ADJUSTABLE SHAFT LOG
BED LOG 2 OAK
DOUBLE DIAGONAL PLANKING
17" DIA STEERING WHEEL ON VERTICAL POST
BOTTOM F
SHEER
L L 6
L L 4
L L 2
CHINE
L.W.L.
CHINE
RABBET
SHAFT
L.W.L.
RABBET
BASE
S
5
4
3
2
1
27½
27½
27½
27½
27½
27½
L L 2
L L 4
DECK
CHINE
DECK
L L 2 L 4 L 6
CHINE
L.W.L.
HALF SIDING OF KEEL
℄

A Boat Series

"DRA

A 14 F



1/16 x 2" FLAT BRASS
HATCH COVERS SAME CONSTRUCTION AS DECK
PIANO HINGE
DECK BEAMS 5/8 x 1 5/8 W. OAK
7/8 H. R. MHGY MOULDING
SHELF 5/8 x 1 1/4" FIR
SIDE FRAMES 3/4 x 2" OAK
BATTENS 3/8 x 2 1/2 OAK
CHINE KNEES 5/8 W. OAK
L. W. L.
L. W. L.
L. W. L.
CHINE PIECES 2 1/4 x 2 1/4" PINE
BASE
BASE
O. A.
3
PLANKING ON BOTTOM DOUBLE - 1/4 M'HGY LAID DIAGONALLY FOR INNER SKIN AND FORE AND AFT FOR OUTER SKIN
KEEL 1 3/8 x 8" W. OAK
SIDE PLANKING, SINGLE 3/8 W. CEDAR - 4 STRAKES EACH SIDE
SECTION AT STATION 3
STEM W. OAK SIDED 1 3/4"
1/8
5/8
1/16
L. L. 6
L. L. 4
L. L. 2
L. W. L.
5
5
5
12
BASE
O. A.
3
4
5
5
1
2
3
6
5
4
DIMENSIONS
1" DIA. FLAG STAFF
GASOLINE FILLER
THROTTLE AND CLUTCH CONTROL ON DASH
2 16 D WHEEL

TABLE OF OFFSE

STATION
L. W. L. TO SHEER
BASE TO CHINE
BASE TO RABBET
BASE TO KEEL
BASE TO ¢ PROP. SHAF
DECK
L. L. 6
L. L. 4
L. L. 2
CHINE
L. W. L.
HALF SIDING KEEL

L. O. A.	14-0
L. W. L.	13-9
BREADTH	5-0
DRAFT	10 1/2
FREEBOARD	
BOW	1-8"
STERN	1-3"

Designed Especially for

MOTOR BOATING

FIFTY-SEVENTH STREET
AT EIGHTH AVENUE
NEW YORK N. Y.

By WILLIAM ATKIN

SCALE
1/2 Inch = 1 Foot

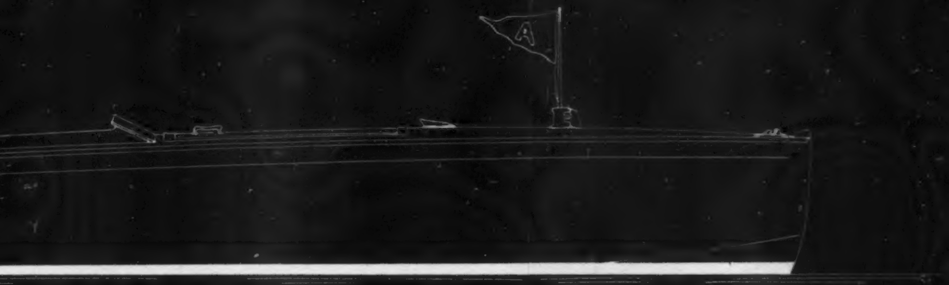
RAGONFLY"

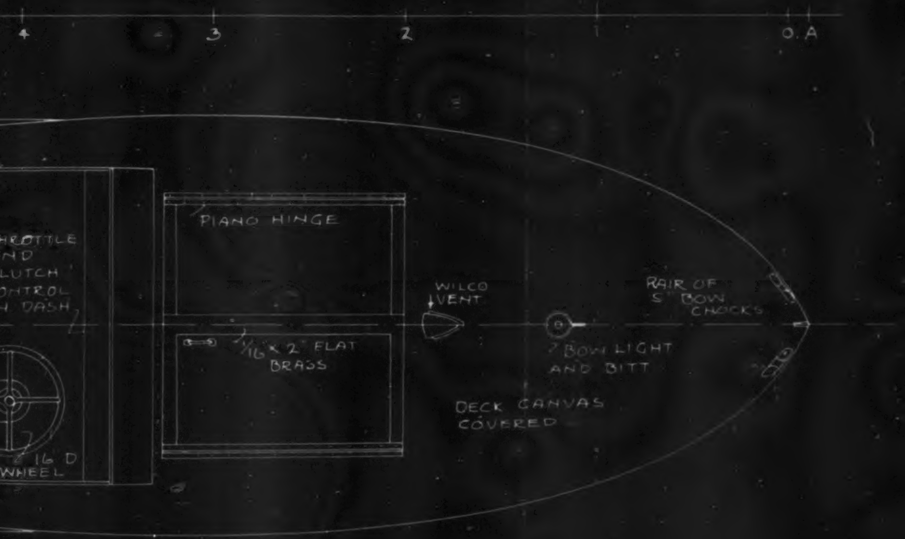
4 FOOT RUNABOUT

OFFSETS NO 255 - DRAGONFLY

	A	0	1	2	3	4	5	S
	← HEIGHTS →							
R	20"	20	20"	19 5/8	18 7/8	17 7/8	16 1/2	15
		17 5/8	13 3/4	11 1/8	10 5/8	9	9	9
			3 3/4	2 1/8	2 3/8	3 5/8	5 3/4	8 5/8
		12	3 1/4	1 5/8	1 7/8	3 1/8	5 1/4	8 1/8
SHAFT				16 1/2	-	-	-	0
	← HALF BREADTHS →							
	1/4	5 1/2	23 1/8	28 3/4	30 1/8	29 1/4	26 3/8	22 1/2
	1/4	3	19 3/8	26 1/2	29 5/8			
	1/4	1 7/8	16 3/4	24 3/4	28 5/8	29 5/8	28 1/4	25 1/4
	1/4-	1 1/8	14 5/8	23	27 3/4	29 5/8	28 7/8	26 3/4
	3/16	7/8	13 1/2	22 5/8	26 3/8	28 1/4	27 7/8	26 1/4
		1/8	11 3/8	-				
EEL		1/8	1 1/8	3	3	3	3	3

ONS IN INCHES TO OUTSIDE OF PLANKING -




4
3
2
1
0. A
HROTTLE
ND
LUTCH
ONTROL
N DASH
PIANO HINGE
1/16 × 2" FLAT BRASS
WILCO VENT
PAIR OF 5" BOW CHOCKS
BOW LIGHT AND BITT
DECK CANVAS COVERED
2 16 D
WHEEL

DRAGONFLY, A FOURTEEN FOOT RUNABOUT

A Big Little Boat Designed for the Amateur Builder and One Having a Good Turn of Speed

Designed Especially for MoToR BoatinG

By WILLIAM ATKIN

Part I

DRAGONFLY is a small boat but withal is a boat that will be welcomed by thousands of men who have limited means and limited room for building their own. Here is a 14 footer that can be built within a reasonable length of time and with a minimum amount of material. She has generous freeboard and is a craft in which two or three can speed about in safety and comfort. It may not be amiss for me to repeat that the size of a boat has nothing to do with its ability to keep going in rough water; rather it is the form of the boat and its balance that scores in this connection. So many folks are under the impression that because a boat is big she must be comfortable and safe. Get that out of your mind.

Her principal dimensions are: length over all 14 feet, length water line 13 feet-9 inches, breadth on deck 5 feet, and draft 10 inches. The freeboard at the bow is 20 inches and at the stern 15 inches. The sheer is a reverse curve which provides excellent height admidships. The sides have ample flare forward to assure dryness and you will notice that aft there is a lot of curve to the sections, the chine being much narrower than the level lines (L. L. 2, 4, and 6). This provides increasing buoyancy as the boat is heeled down in turning or in running in choppy water.

Have stuck to a single cockpit, not only because of the limited length but because this is the part of the boat that feels less the impact of the water while under speed. While I have designed many double cockpit boats, in fact I designed and built the first of this species ever heard of away back in 1907, I like to sit aft best; seems more natural, somehow, I know it is more comfortable. And again we have the steering wheel with vertical post; just try this type once and you will not go back to the automobile manner of steering a boat. The wheel post will be connected to the rudder post with gears, rods, and levers as made by Kainer; it is best to have positive steering. If gear of this kind is not easily obtainable use a drum on the bottom of the steering post made of oak or locust, this being at least six inches in diameter and having a flange at top and bottom. Then use a bronze quadrant on the rudder post. The drum must be very securely fastened to the steering post. Flexible galvanized tiller rope should be used to connect the drum to the quadrant and this should be lead through blocks having sheaves of large diameter. The tiller rope should be ¼ inch in diameter. A turnbuckle must be spliced in the tiller line each side of the quadrant.

Now I hope when you have built this little boat that you will use it without seeing how close you can come to folks in other craft, and that when you come into the anchorage of other yachts you will slow down and give moored craft a wide berth. You know it is not only discourteous but dangerous to run fast in close quarters. I know a man who got a darn hard sock on the jaw for his carelessness in running wide open within a few feet of a man fishing from a small skiff. The sock (by the man in the fishing boat) occurred two days after the event; but smarted just the same. So you see this *is* a very dangerous practice at best.

The cockpit seat is 3 feet-8 inches wide so will comfortably seat three persons. There is good foot room and the seat is low down in the boat giving a nice sense of security. I think it is bad practice to have high seats in any kind of boat, and this applies to skiffs, and dinghies, as well as to motor boats.

In a boat of this kind provision must be made to get the motor out in the event of needed repairs and overhauling. For this reason it would be best to fasten all of the bulkhead between the cockpit and engine space with round head screws being careful to place washers under these. I should also follow the same practice with the cockpit floor and the seat and seat back.

The hatches over the engine will swing on piano hinges, these to extend the full length of each hatch cover. Then there will be a strip of 1/16 by 2 inch wide flat brass to cover the opening between the hatches and the deck. You need not worry much about ventilation in the engine space, remember that the carbureter is pulling in a stream of air all the time the engine is running; and that plenty of air will flow in under the cockpit floor, and through the slot in the floor where the reverse lever protrudes. Then for good luck's sake we have a 5 inch Wilco ventilator in the deck just forward of the engine hatch.

I should use one of the several makes of bow lights that are contained in a bronze mooring bitt. This being a boat under 26 foot in length the combination light will pass Government regulations. Now speaking of regulations; there are far too many folks using boats who feel that the regulations imposed upon motor boats are sort of a gesture of the law that might just as well be evaded like the Volstead Act. Well I'll tell you what I think. Not half the equipment is carried that should be: the Government does not go far enough. In addition to the lights, and life preservers, and two copies of the pilot rules (which all too few boat owners ever bother to read) and the fire extinguishers, whistle, and fog horn, all small craft should carry in addition an anchor and line; they should have buoyancy tanks, or water tight compartments; and they should be obliged to carry or tow an unsinkable small dinghy or carry a small life raft; and last but not least every boat should carry a good bilge pump. It is the part of common sense to go farther than required when fulfilling the requirements of the Government's laws relating to the operation of motor boats.

Somehow I wonder why it is that so many runabouts are finished in varnish with a white boot top and a green bottom. High grade green bottom paints are excellent for bottoms but inferior green paints do not protect against grass and other things as well as brown copper or bronze paints, least ways this is what I have found by experience. Now it seems to me that a painted hull and a deck covered with canvas

(*Continued on page* 76)

SMALL MOTOR BOATS

Their Care, Construction and Equipment

A MONTHLY PRIZE CONTEST CONDUCTED BY MOTOR BOATMEN

Questions Submitted for the September Contest

1. **What type mooring buoy have you found most suitable and how do you prevent the buoy from chafing the hull?**
Submitted by W. B. M., Newburgh, N. Y.

2. **For the benefit of those selecting their first boat, describe the various types of boats, explaining for which locality and particular use each is best adapted.**
Submitted by E. F. C., Cambridge, Mass.

LAYING OUT A STORAGE YARD

Small Boat Clubs Will Find the Articles and Illustrations of Great Value in Simplifying Their Boat Hauling and Storage Problems

Answers to the Following Question, Published in May MoToR BoatinG

How would you lay out a club's new winter storage yard so as to provide the easiest and quickest moving of yachts at hauling time?

EFFICIENCY IN HAULING BOATS

(The Prize-Winning Answer)

OFTEN the club storage yard just happened to be as it is. At the time that the marine railway for hauling the boats was constructed, the yard was not planned to make hauling and skidding the boats from the car easy and quick work. The small number of boats laid up did not require quick work and the skippers and their crews worked until the boats were out and blocked up. Two or perhaps three boats was a day's work then and the hauling was more of a frolic than a task. Motor boating has grown in leaps and bounds since then and it has become necessary to handle more boats in the same time with a smaller crew. To speed up the work with a shorter crew requires more efficient methods than jacking up the boat, placing planks and rollers under her and skidding the boat down the inclined planks to the ground. The increased number of boats has, in many cases, crowded the yard space. For all no more land is available the boats must be taken care of, a careful planning of the yard so that one large boat lies behind two smaller ones or a small boat between the bows of the big fellows will conserve space and still leave room to work around them when cleaning and painting. Two foot clearance all around a boat is ample space to scrape and paint in or even to put on a new plank.

The following thought is offered as a solution to the ever increasing laying up problem. The layout is arranged especially for the new club or new storage yard. However, there is no reason why the old storage yard can not be rearranged to increase its capacity and hauling facilities. In this plan the boats are hauled on a double car. The hauling car is fitted with rails upon which the skidding car rests and the two are run out in the water together. The boat is chocked on the car and hauled to position, where the skidding car is pushed off on to the skidding rails. By jacking the boat to clear the car and blocking beyond the car, either temporarily or permanently, the car is released and ready for another boat. An extra skidding car would reduce the time for hauling two boats considerably, but the total time would be the same unless a hauling and skidding crew were available. If several owners cared to build or purchase cars, these might be used by all until the owner's boat was hauled. Then the boat would be laid up on the car and no jacking or possible racking of a light boat would be done.

The laying out of the yard and construction of the cars is not quite as simple a matter as hauling the boats

RULES FOR THE PRIZE CONTEST

READERS are urged to consider the above questions for the September issue, and send answers to them to the Editor, MoToR BoatinG, 57th Street at Eighth Avenue, New York, N. Y. Answers should be (a) in our hands on or before July 25, (b) about 500 words long, (c) written one side of the paper only, (d) accompanied by the senders' names and addresses.

The names will be withheld and initials used.

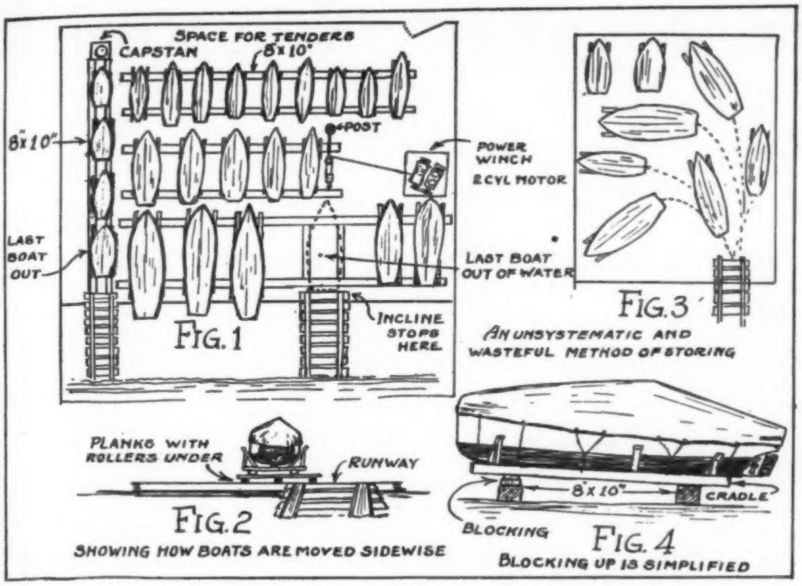
QUESTIONS for the next contest must reach us on or before July 15. The editor reserves the right to make such changes and corrections in the accepted answers as he may deem necessary.

The prizes are: For each of the best answers to the questions above, any article or articles sold by an advertiser advertising in the current issue of MoToR BoatinG of which the advertised price does not exceed $25 or a credit of $25 on any article which sells for more than that amount. There are two prizes—one for each question—but a contestant need send in an answer to only one if he does not care to answer both.

For answers we print that do not win a prize we pay space rates.

For each of the questions selected for use in the following month's contest, any article or articles sold by an advertiser advertising in this issue of MoToR BoatinG of which the advertised price does not exceed $5, or a credit of $5 on any article which sells for more than that amount.

All details connected with the ordering of the prizes selected by the winners must be handled by us. The winners should be particular to specify from which advertisers they desire to have their prizes ordered.


SPACE FOR TENDERS
CAPSTAN
8"x10"
8"x10"
POST
POWER WINCH
2 CYL MOTOR
LAST BOAT OUT
LAST BOAT OUT OF WATER
INCLINE STOPS HERE
FIG. 1
FIG. 3
AN UNSYSTEMATIC AND WASTEFUL METHOD OF STORING
PLANKS WITH ROLLERS UNDER
RUNWAY
FIG. 2
SHOWING HOW BOATS ARE MOVED SIDEWISE
8"x10"
CRADLE
BLOCKING
FIG. 4
BLOCKING UP IS SIMPLIFIED

J. E. M. shows a neat and orderly system of boat handling

after the yard is arranged. The track for the hauling car must be lowered so that the rails on the car will check with similar rails laid on shore. This will require either a timber cribbing or a concrete wall each side of the track to hold up the bank and the ties and rails must be carefully laid so that the rails on the car will meet the skidding rails at any position. The lowered hauling track has the advantage of easy skidding even with rollers or greased ways and the incline of the track is less. Level ground is desirable. Unless there is an advantage in laying the track, or in getting the boats on the car by laying it to one side, the hauling track should be near the center of the yard. There is less likelihood of boats being blocked in with the center track. A power driven drum is the nicest arrangement for hauling the car and a back haul will be found a great convenience.

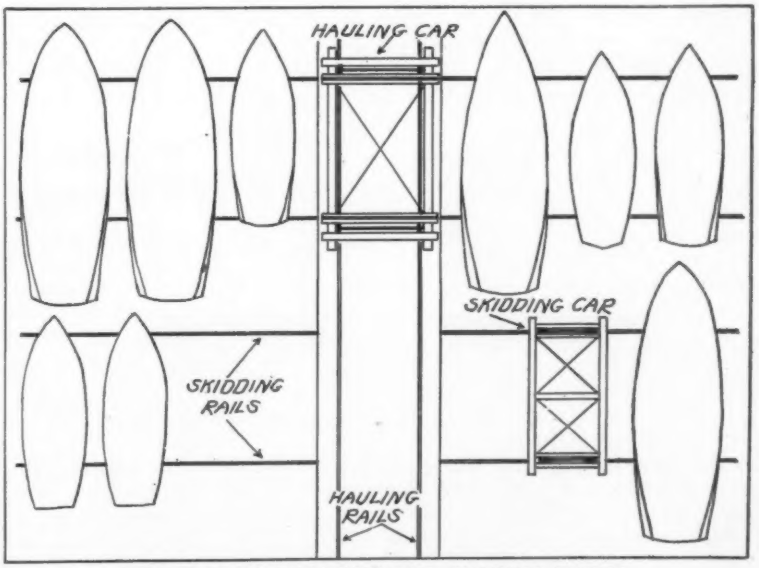
Before the skidding rails are laid, check over the boats that must be taken care of. Get their length and beam and probable time of hauling. With this information and the size of the yard an approximate plan with the location of each boat can be drawn. Beginning inshore, lay the skidding rails to a gauge that the hauling car will accommodate and locate them according to the boats decided on for the first line. There may be an advantage in not aligning the skidding rails each side of the yard. Succeeding tracks may be laid according to the plan. Arrange to haul the heaviest boats last, using only the hauling car and block the boats up over the rails. Leave the last boat on the car and block.

Steel cars are most practical for hauling and skidding. They require no weighting to prevent them from floating off the track, may be built lower and they will not rot and become weakened as a wooden frame car will.

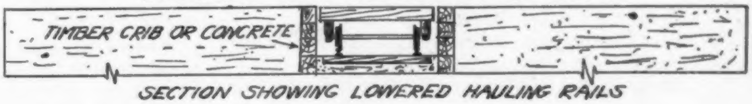
Club finances and the enthusiasm of the members will determine what type car will be used. If the finances are low and the members must do the work the wooden car frame will be least expensive. Car wheels and boxes and rails in almost any weight can be purchased from most dealers in contractor's equipment. A car 16 feet long will handle a forty footer. Use 6 inch by 6 inch stringers with bearing pieces bolted over the wheels or to just clear them. The larger the wheels the easier the car will run but, unless underslung, large wheels make the car too high. A wood frame car must be weighted anyway so use heavy cross rails bolted to the frame with bearing plates under.

The construction of the skidding car follows along the same lines except that the wheels turn the short way of the car. Each wheel has a short axle and two boxes. A full length axle would have to be exceptionally heavy on account

(*Continued on page* 94)


HAULING CAR
SKIDDING CAR
SKIDDING RAILS
HAULING RAILS

YARD PLAN-LOCATING AND PLACING BOATS


TIMBER CRIB OR CONCRETE

SECTION SHOWING LOWERED HAULING RAILS

W. B. M. employs a system of double rails for moving boat in two directions

THE VALUE OF HEAT INDICATORS

Simple Device Easily Installed Serves Many Useful Purposes and Enables Operator to Be Informed on Engine Performance at All Times

Answers to the Following Question, Published in May MoToR BoatinG

Of what value is the heat indicator to the marine motor and how should it be attached to the circulating system in order to obtain true readings?

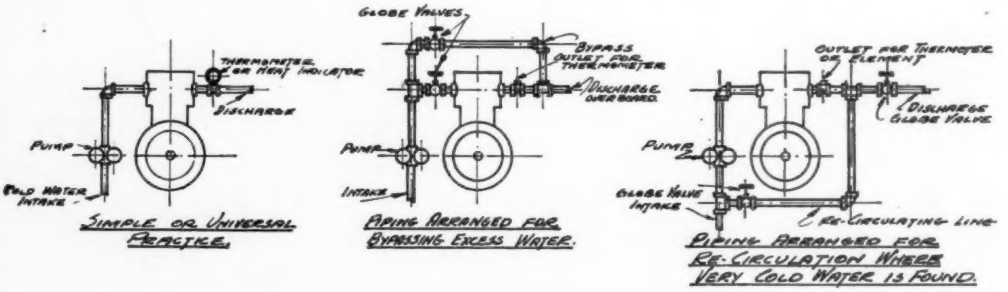
MARINE HEAT INDICATORS

(The Prize-Winning Answer)

NO apology should be made for referring to the universal use of heat indicators, or thermometers, on automobiles which installation is generally on the radiator cap direct, or fastened to the instrument board, with remote connection to the water jacket of the engine. This is brought to your attention to show that the leading users of gasoline engines feel it necessary that it be included for protection to the power plant. However, in this connection it really performs only one function and that is to warn of overheating when, at such a time, the motor should be shut off and investigation started to find the cause which, by the way, is generally from lack of water.

Installed on the motor boat engine, it serves several purposes by warning of overheating; running the engine too cold; regulating fuel economy, including the proper care of the lubricating oil.

It, of course, must be decided what kind or type of instrument is to be used. A regular brass encased glass tube thermometer can be obtained at many Mill Supply Houses, which have standard pipe threaded bases. However, they cost considerable whereas the type used generally for this work is very reasonably priced. Where an engineer is required, it would be best to install the unit close by, but with bridge deck and runabout controls, it should be located on the instrument board, with proper connection of flexible tubing provided for the purpose.



SIMPLE OR UNIVERSAL PRACTICE.

PIPING ARRANGED FOR BYPASSING EXCESS WATER.

PIPING ARRANGED FOR RE-CIRCULATION WHERE VERY COLD WATER IS FOUND.

Piping arrangements by H. S. to insure correct water circulation

The connection for the element, or thermometer bulb may be placed in the circulating water discharge line close as possible to the water jacket; or better still, have the jacket tapped and screw the element in, which will provide a much better heat condition for the bulb.

It is needless to say that should the temperature reach above 210 degrees Fahrenheit, the motor should be shut down and an investigation made.

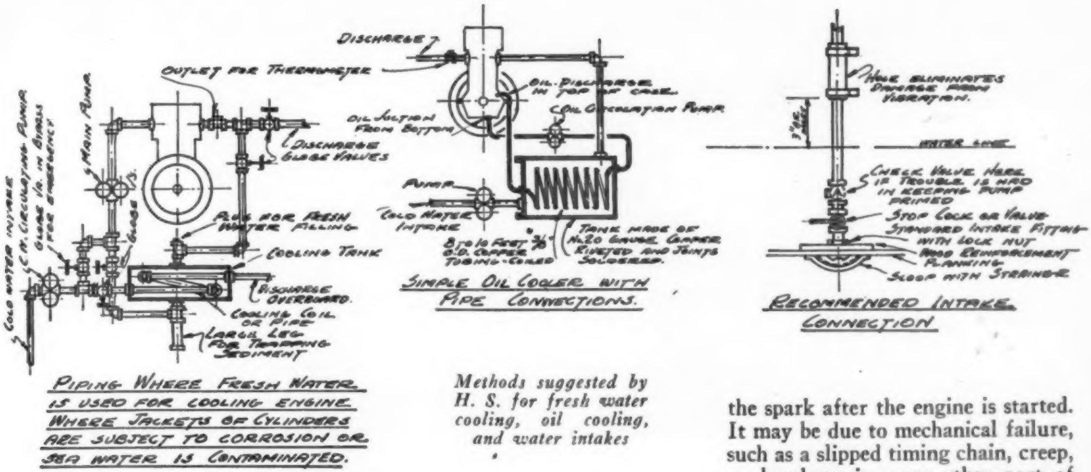
It is common practice to run a marine engine too cold even to the point where the hand may be placed on the cylinder head comfortably. This causes the carbureter to be adjusted for a much too rich a fuel mixture, thereby wasting fuel unnecessarily. A thermometer will show this condition and allow the adjustment of the circulating water supply to be shut off slightly and the fuel mixture made much leaner after the temperature has reached somewhat above 165 degrees and up to about 200 degrees.

With the advent of high speed engines, it is advisable to supply a heat indicator for the lubricating oil to properly maintain the supply and viscosity or quality. Generally, the high speed power plant passes the oil through a filter and an oil cooler. Where the latter is employed, the thermometer will prove valuable to check its operation. As a rule oil temperatures vary from 90 to 110 degrees after running the power plant a short period.

The sketches are believed to be simple enough to be readily understood and show how the circulating water piping may be arranged to vary the motor temperature. A drawing of a simple oil cooler is shown, which is used by the writer with good results and is capable of taking care of moderate sized engines.

In the case of the motor car, it is seldom that any carbureter adjustment control is brought to the dash other than the choke, and it might be well to mention here that too much use of the choke in starting dilutes the crankcase oil by the passage of unburnt, raw gasoline by the pistons. In this connection this same practice is generally followed aboard the motor boat where a far greater quantity of fuel is used with the same operating conditions. By bringing to a convenient point controls for the auxiliary air port and needle valve of the carbureter, the minimum fuel content in the mixture can be obtained by watching the temperature gauges and judging the engine's operation. This is a sure way to reduce fuel consumption and will pay for any extra equipment outlined herein within a short period of time.

Should you adopt any of these suggestions you will probably alter your water circulating piping to some extent, and it might be well to bear in mind the following: The intake connection through the hull should be well constructed and located where it will be in the water all of the time, but where it will not be


DISCHARGE
OUTLET FOR THERMOMETER
COLD WATER INTAKE
C.R. CIRCULATING PUMP
GLOBE VA. IN BYPASS FOR EMERGENCY
MAIN PUMP
GLOBE
DISCHARGE GLOBE VALVES
PLUG FOR FRESH WATER FILLING
COOLING TANK
DISCHARGE OVERBOARD.
COOLING COIL OR PIPE
LARGE LEG FOR TRAPPING SEDIMENT
PIPING WHERE FRESH WATER IS USED FOR COOLING ENGINE WHERE JACKETS OF CYLINDERS ARE SUBJECT TO CORROSION OR SEA WATER IS CONTAMINATED.
OIL DISCHARGE IN TOP OF CASE.
OIL SUCTION FROM BOTTOM
OIL CIRCULATION PUMP
PUMP
COLD WATER INTAKE
8 to 10 FEET 3/8" O.D. COPPER TUBING - COILED
TANK MADE OF No. 20 GAUGE COPPER RIVETED AND JOINTS SOLDERED.
SIMPLE OIL COOLER WITH PIPE CONNECTIONS.
HOSE ELIMINATES DAMAGE FROM VIBRATION.
3" OR MORE
WATER LINE
CHECK VALVE HERE IF TROUBLE IS HAD IN KEEPING PUMP PRIMED
STOP COCK OR VALVE
STANDARD INTAKE FITTING WITH LOCK NUT
WOOD REINFORCEMENT
PLANKING
SCOOP WITH STRAINER
RECOMMENDED INTAKE CONNECTION

Methods suggested by H. S. for fresh water cooling, oil cooling, and water intakes

likely to become clogged in shallow water, or when aground, which is sure to happen sooner or later. Install a good combination water scoop and screen over the connection on the outside, and a reliable shut-off cock inside where it can be readily reached and with as few pipe joints as possible between it and the hull. From the shut-off valve to a point several inches above the water line, run a piece of pipe from which point connect to the pump with hose. By such procedure, should the intake become clogged, the hose can be disconnected and a length of wire passed through for cleaning. Should any part of the hose or piping become broken, or disconnected, the boat will not be flooded as the rigid length is above the water line and protected from vibration by the hose.

H. S., New Orleans, La.

THE VALUE OF AN INDICATOR

THE control of circulating water temperature is an important factor in efficient marine engine operation. The temperature indicator is the only reliable device that will serve as an index to proper control.

The functions of the temperature indicator may be outlined briefly:

First, to serve as a warning of engine trouble which manifests itself through overheating.

Overheating is a danger signal, and if unheeded, may result in piston seizure, warped valves, or other damage to the engine or boat.

Overheating may be due to stoppage of the water supply because of mechanical failure of parts of the circulating system, trash in the intake or piping, or the formation of excessive scale in the engine jackets.

It may be due to failure of the oil supply, inducing excessive friction which causes more heat to be transferred to the cooling water, consequently raising its temperature. Failure of the oil supply may be due to mechanical breakage, loss of oil through use of leakage, or excessive wear of pump or bearings, preventing the maintenance of proper pressure.

Overheating may be due to operating with the spark retarded. This is usually due to carelessness on the part of the operator who forgets to properly adjust the spark after the engine is started. It may be due to mechanical failure, such as a slipped timing chain, creep, or breakage in some other part of the ignition drive.

Second, to serve as an index of efficient operation.

An internal combustion engine is most efficient when operated at the highest temperature that is allowable by the materials used in its construction and operation.

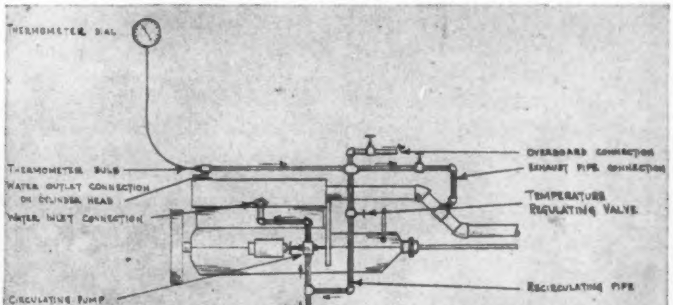
Engines cooled by fresh water may be operated with the water boiling, provided proper lubrication is maintained.

Those cooled by salt water could be operated with the water boiling were it not for the scale that is formed inside the water jackets when salt water is heated or evaporated. The temperature of the water should not exceed 140 to 160 degrees Fahrenheit when salt water is used for cooling.

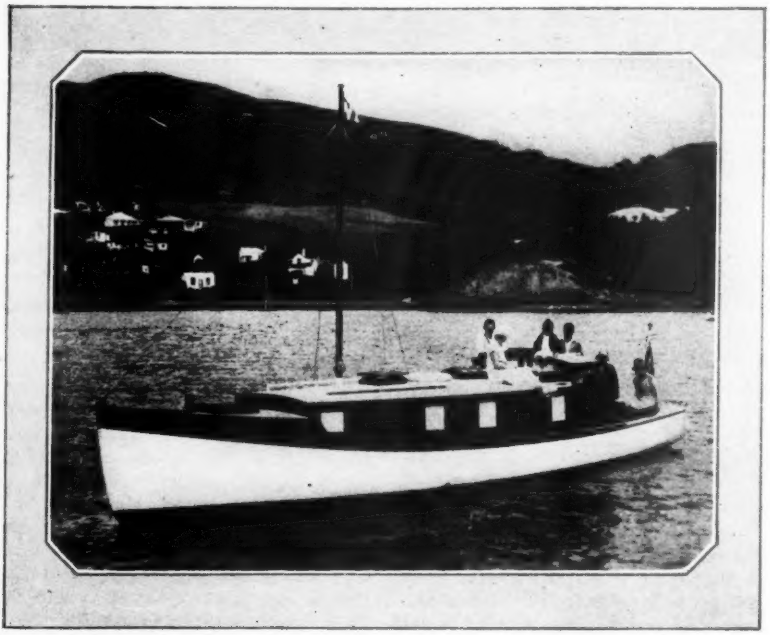
Engines that are operated with water that is too cold form carbon deposits more quickly. The cold metal surfaces of the engine chill the burning gases in the cylinder and valve passages and cause the deposition of unburned carbon. These deposits accumulate, reduce the power output, tend to cause preignition and must, in time, be removed.

Warm engines are more flexible and are more efficient. They are instantly responsive to changes in throttle opening and will not stall when idled at low speed. Better efficiency effects a saving in fuel. In some engines lower grades of fuel may be used satisfactorily. This decreases expense and because of the lower degree of volatility of the poorer fuel, there is less danger of accidental ignition of vapor, consequently the fire hazard is reduced.

A correct installation of (*Continued on page* 86)


THERMOMETER DIAL
THERMOMETER BULB
WATER OUTLET CONNECTION ON CYLINDER HEAD
WATER INLET CONNECTION
CIRCULATING PUMP
INTAKE
OVERBOARD CONNECTION
EXHAUST PIPE CONNECTION
TEMPERATURE REGULATING VALVE
RECIRCULATING PIPE

M. H. shows method of piping water and installing heat indicator



The 36- foot cruiser, Ngaio, owned by Dr. A. J. Cottrell, on Broad Bay, Dunedin, N. Z. A Kermath 35 provides a speed of 12 m.p.h.

YARD AND SHOP

Notes of Interest to Both Owner and Manufacturer

NEW AND OLD IN MARINE ENGINES

AN old two-cylinder marine motor, made thirty-two years ago in a little shop at 120 Hoyne Avenue, Chicago, is about to join many of its industrial contemporaries in the Museum of Science and Industry of Chicago, there to take its place as an example of early engineering enterprise now made obsolete by the progress of modern skill.

E. H. Fahrney, president of the Universal Motor Company, one of the oldest and the largest in its class of marine motor manufacturing companies, has presented to the museum the first marine motor which he designed and built in 1898.

This motor, the forerunner of the popular Blue Jacket Model, is an eight horsepower, four-cycle motor with a 5x6 bore and stroke. It weighs 1200 pounds. In its day it was considered the acme of perfection in marine circles but compared to the latest Universal motor—the Blue Jacket—it serves only to show the strides that have been made in the design of marine motors in the last thirty-two years.

The Blue Jacket is a four-cylinder motor, also four-cycle, with a 3x3½ bore and stroke and develops 47 horsepower. It weighs 300 pounds fully equipped. Thus, since Mr. Fahrney made his first motor, a reduction of 75 per cent in weight has been made and the power has been increased 600 per cent.

(*Continued on page* 68)

Dee Wite runabouts plane easily and maintain high speeds with a full load

Sailors Beware!

. . . of the China you Ship on the Sea

WHETHER you're the lord high admiral of a put-putting "Polly" or the salt bitten skipper of a keeled palace . . . your galley should be your chief boast and greatest attraction!

Remember, when guests come aboard you're more than the skipper . . . you're the host. And in land-lubbers' eyes that's where you'll stand or fall as a worthy member of Neptune's own!

Your ropes may be coiled to perfection, your brass may shine with a mirror's brightness, your crew be as alert and dashing as a destroyer's manoeuvres, but if your china and crystal aren't up to the mark, you're down on the books as a barnyard mariner! And all the badged caps and brass buttons in the world won't make them change their minds.

Then here's hoping your galley is as smartly rigged as your tops! And if it's not, here's the hope that you'll let Ovington's be your pilot to the ways and means of making it so. It needn't be expensive. We can fit you out with a dinner set, complete for six, emblazoned with your club and yacht flags for as little as $63. And crystal too, nautical and nice, for as little as $37.

Three weeks from the day you request designs we'll have you ship shape and seaworthy in the highest social sense of the terms.

"Gifts from all
over the World"

OVINGTON'S

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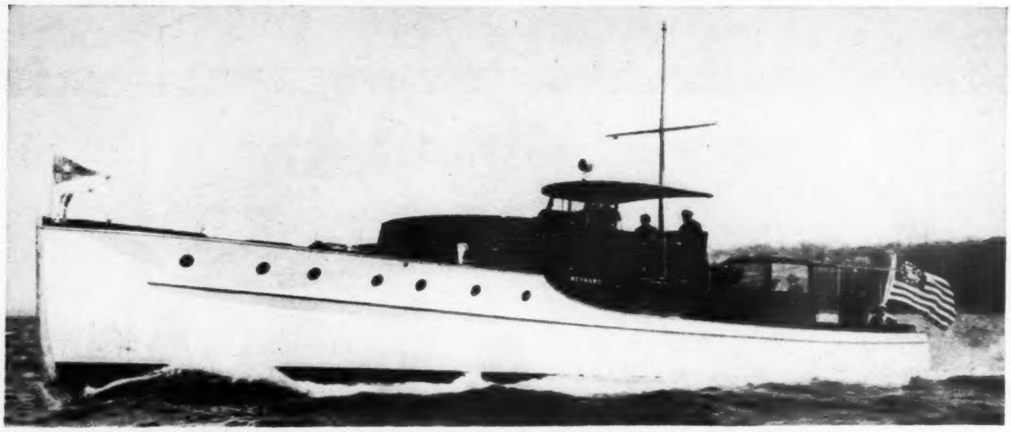


Thomas Lamont's 75-foot commuter Reynard, built by Consolidated

SPEEDWAY-POWERED

Thomas Lamont's new Reynard, a 75-foot commuter designed and built by the Consolidated Shipbuilding Corporation, Morris Heights, New York City, is powered with two 300 horsepower each Speedway marine engines. Reynard on trial made nearly 27 miles per hour.

This boat carries all the characteristics of Consolidated commuters and was one of the first to go in commission this season. The hull is double planked, with cabins and trim of mahogany. The interiors are conventional for the commuter type. The deckhouse forward with exceptionally low windows permitting unobstructed vision, is a combination dining room and lounge. Large owner's cabin is arranged aft below cabin trunk with adjoining bath. There is also a large after-cockpit. Crew's quarters are arranged forward.

One dealer's method of displaying the 1930 cruisers to the public

Elco CRUISERS
ROY M. BREWSTER
Phone BAY SHORE

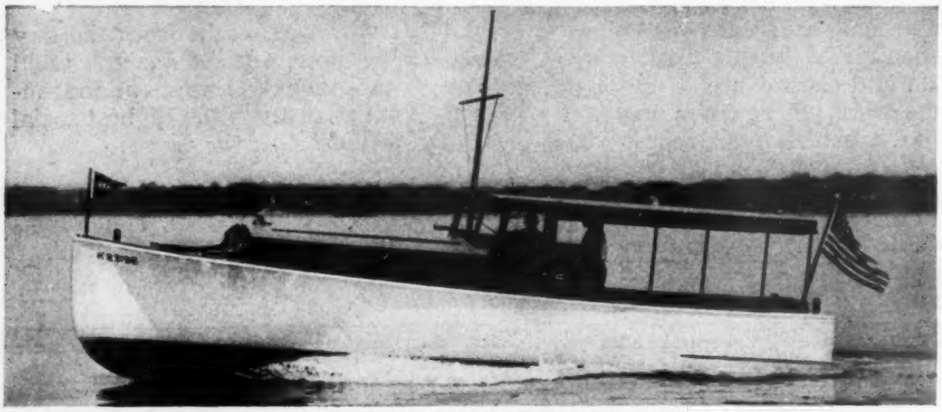
Mr. Lamont's commuter of last season was also known as the Reynard, ex-Little Viking, formerly owned by George F. Baker, Jr. The new Reynard adds another commuter to the Consolidated fleet which come and go from the New York Yacht Club Station, 26th Street daily.

DISPLAYING THE STOCK CRUISER

A unique departure from the conventional way of selling cruisers is now being most successfully demonstrated by Roy M. Brewster, the Elco dealer in Bay Shore, Long Island.

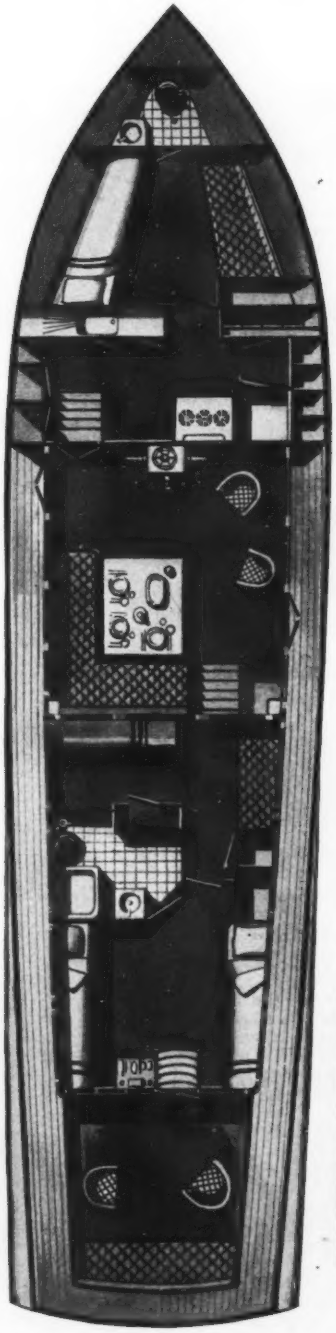
The photograph illustrates one of the popular Elco Marinettes, a 27-foot cruiser with complete accommodations for sleeping four persons. This boat is on permanent exhibition in an enclosure which is adjacent to Mr. Brewster's office and which fronts directly on the Merrick Road at Bay Shore. Many thousands of motorists passing by are attracted by this unusual display and a great many take the opportunity of immediately going aboard for a complete inspection; particularly on Saturdays and Sundays hundreds of interested prospects visit the display, many of which result in active buyers for either new or used boats.

In addition to this display, Brewster maintains an Elco 35-ft. Cruisette in the (*Continued on page* 106)



A good view of one of the 1930 Marblehead 34-foot cruisers built by Staples Johnson, and owned by Harold Greely of Stamford, Conn. A 100 h.p. Kermath provides 17 m.p.h.

The Vinyard Fifty is Unexcelled

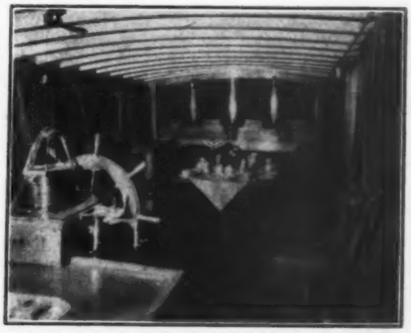


IN selecting your next cruiser you naturally want a craft superior to your present one. You will want the safety of twin-screw power. You will want the ruggedness that comes of over-size strength, first-grade quality and skilled workmanship. You will want the seaworthiness and maneuverability which comes of tried and proven hull design.

Furthermore, maximum comfort in accommodations and completeness of appointments are essential; running hot and cold water, electric refrigeration and independent electric lighting plant. The unexcelled Vinyard Fifty-Foot Twin-Screw Motor Yacht gives you all of these desirable features. It is a luxurious craft on which you can take long cruises through open or rough seas without discomfort. It has sleeping quarters for seven and a large deck house dining saloon.

Vinyard Twin-Screw Motor Yachts are also available in fifty-five foot lengths with accommodations for nine persons. You can have immediate delivery on either fifty or fifty-five foot models.

The Vinyard Fifty is an able sea-going cruiser, having speed of 17 miles per hour.



The deck saloon makes a congenial dining room or lounge. Note centralized controls for one-man operation.

Write today for full particulars, or be our guest on a trial trip at Milford

Vinyard Ship Building Company

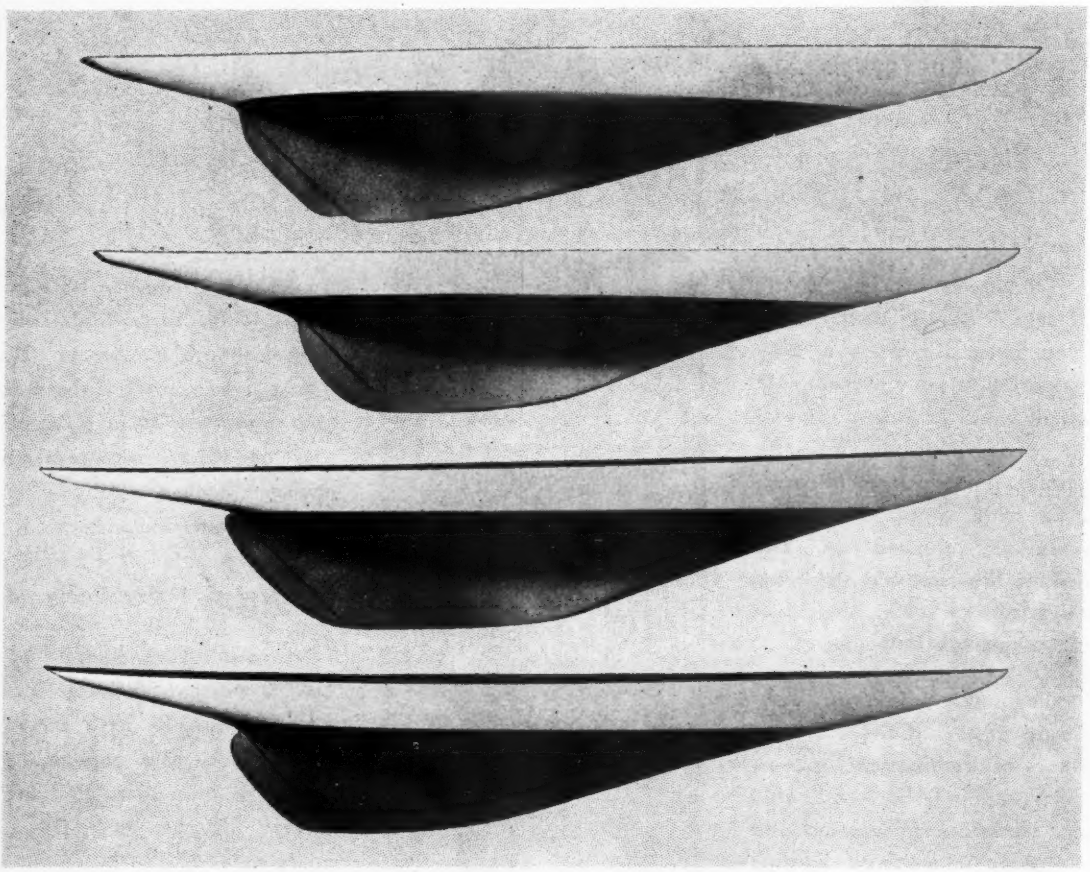
Designers and Builders of Yachts and Cruisers of the Highest Class

MILFORD, DELAWARE

New York Sales Representatives: BRUNS, KIMBALL & CO., Inc., Fifth Avenue and 15th Street

THE FIFTEENTH AMERICA'S CUP MATCH

(Continued from page 33)



A comparative study of the hull lines of the four American sloops. They are top to bottom, Weetamoe, Enterprise, Whirlwind and Yankee

After another lapse of five years a new challenger in the person of Captain Cuthbert of Belleville, Ontario, appeared. His sloop Atalanta was named as the challenger and the defender selected was the sloop Mischief owned by John R. Rusk being the first metal boat ever to be used in the race. In both races Atalanta was badly beaten losing by 28:20-¼ the first day and 38:54 the second day. This is the first year in which the sloop rig was used as all prior contests had been with the schooner type of yacht.

Four years later, in 1885, Sir Richard Sutton challenged with his sloop Genesta and the defender selected to meet her was Puritan owned by a Boston syndicate. Puritan was the first of the Boston built sloops designed by Edward Burgess whose son, W. Starling Burgess is the designer of the present sloop Enterprise. During this year Puritan won her first race by 16:19 and two days later was again successful by a narrower margin of 1:38. An additional challenge had been received in 1885 from Lieutenant William Henn This had been tentatively accepted in the event of the defeat of Genesta and in 1886 his sloop Galatea met a new Burgess boat Mayflower, owned by General Paine in a series of two races. Mayflower won both, the first by 12:02 and the second by 29:09.

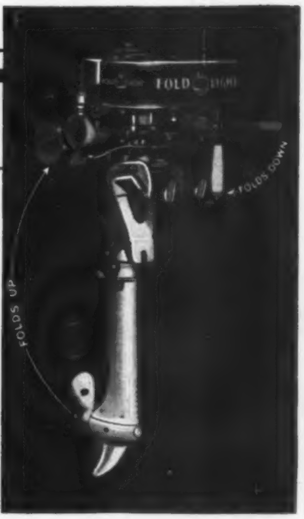
The next year, in 1887, a new syndicate headed by James Bell challenged with a cutter Thistle, while the defender selected was Volunteer owned by General Paine. An immense crowd of spectators witnessed the first race during the close of September when Volunteer was victorious by 19:23-¾. The second race sailed a few days later again returned Volunteer a winner by 11:48-¾. A change in the rules about this time made it possible to design Thistle especially for the race and she had five feet more beam than Galatea on the same length. She was designed particularly for the wind and weather conditions about New York and to meet the size of a possible defender. General Paine with Volunteer which was a steel vessel had no difficulty in winning the match.

Further important changes were made in the Deed of Gift and in 1893 Lord Dunraven challenged with his sloop Valkyrie II. C. Oliver Iselin headed the syndicate which owned Vigilant which was the first of the fast racing boats built by Herreshoff. The match this year consisted of three races, the first two of which were taken by Vigilant. She defeated Valkyrie II by 5:48 in the first race and 10:35 in the second race. The last of the three races was to be the deciding race and was a day of heavy wind and sea. Valkyrie rounded a mark about two minutes before Vigilant and crowded on all possible sail. A slight mishap to the English boat permitted Vigilant to win by a scant 40 seconds. Lord Dunraven was not satisfied with the results and challenged again with Valkyrie III in 1894 when Defender owned by a syndicate headed by W. K. Vanderbilt was chosen to meet the challenger. Defender was the second Herreshoff boat chosen for the race. This particular series during 1895 was most unsatisfactory since Defender won the first race by 8:49 and the second race by only 47 seconds. During the third race, Valkyrie III crossed the starting line and then withdrew. Much ill feeling had been aroused although the real motive behind the charges made in connection with the series remain unexplained.

Sir Thomas Lipton entered the International yacht racing sport in 1899 with his first sloop Shamrock. This boat met the defender Columbia owned by J. Pierpont Morgan and others in a series of three races during October of that year and was defeated. In the first race the defender won by over ten minutes. The second race the next day was unfortunate for Shamrock since she carried away her topmast and withdrew while on the third and last race the two boats had a sharp battle with

(Continued on page 72)

FOLD-LIGHT



NOW — capable power compacted within new limits of lightness, handiness, portability — what a boon to the fisherman who seeks far-away pools — to the cottager who needs a dependable "water taxi" — to the yachtsman tired of toil at the oars of a dinghy!

Not merely in one feature — but in every characteristic that could add value to a motor in its power class, Fold-Light is outstanding!

Fold-Light weighs only 29 pounds; thus it is the *lightest* twin outboard by a very wide margin.

Fold-Light *folds* — instantly and easily — thus reducing bulk to half — and permitting stowing in a carrying case less than 18 inches long.

Fold-Light develops 2¾ horsepower — drives average boats 7 to 10 miles an hour. Special waterproof magneto insures easy starting. An automatic system provides lubrication direct to the main bearings. Rubber bearings cushion the power head and insulate vibration from the boat. Twin mufflers quiet exhaust noises.

See the Fold-Light at any Evinrude, Elto or Lockwood dealer — or write for complete descriptive literature!

OUTBOARD MOTORS CORPORATION
Ole Evinrude, *President* **5124-27th St., Milwaukee**

Sold *by* EVINRUDE *Elto*
***and* LOCKWOOD**
Dealers throughout the world

THE FIFTEENTH AMERICA'S CUP MATCH

(*Continued from page* 70)

Columbia reaching the outer mark only a few seconds ahead of Shamrock. Columbia finished very strong, however, and crossed the line some six and one-half minutes in the lead.

Two years later Sir Thomas sent over a new boat, Shamrock II, in a second attempt to regain the cup. Columbia was again selected to meet Shamrock II and in a series of three races during September and October Columbia was able to retain the cup by winning all three races. The margin, however, was much closer than in the previous year as she won by only 1:20 in the first race; 3:35 in the second race and the very scant margin of only 41 seconds in the third race. Sir Thomas gained renewed confidence as a result of this series and challenged again for another try in 1903.

As a challenging yacht, Sir Thomas nominated his new Shamrock III and a fast sloop was built by Herreshoff and christened Reliance. The result of these three races during 1903 were again discouraging to Sir Thomas as his boat was beaten by 7:03 in the first race and 1:19 in the second race. In the third attempt Shamrock III withdrew and did not finish.

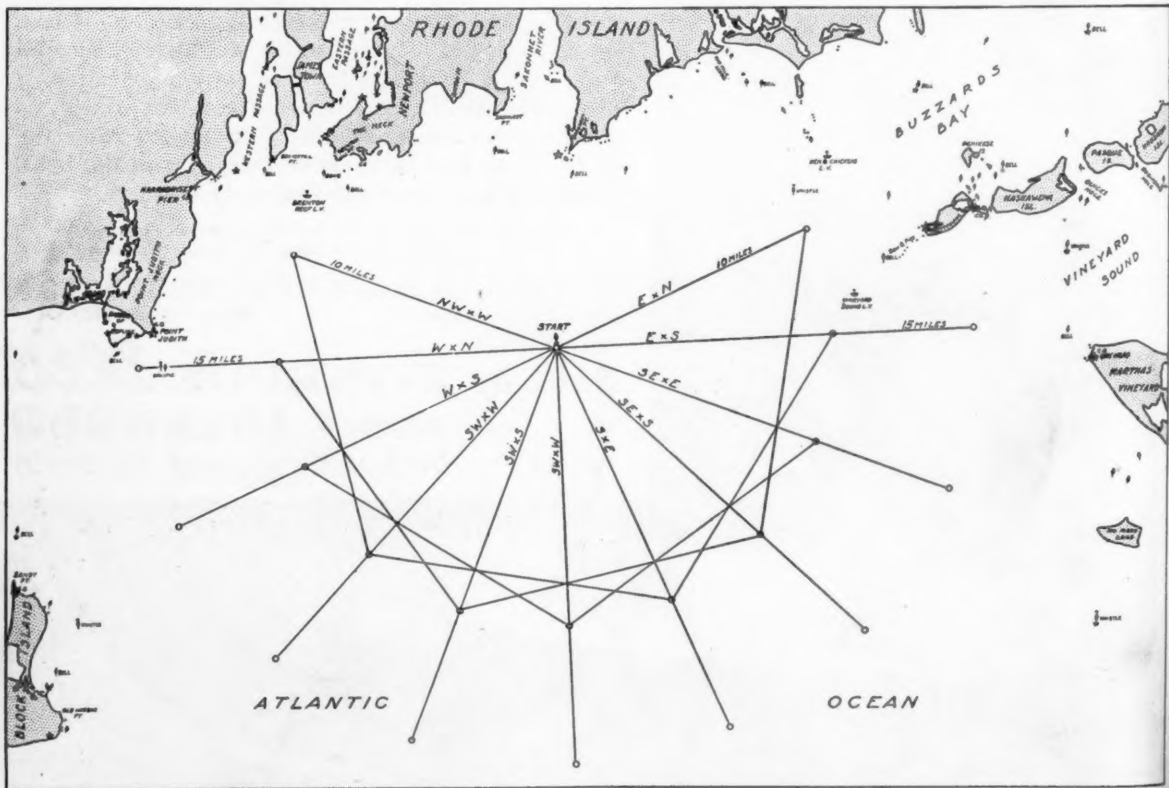
After a lapse of ten years, Sir Thomas issued still another challenge for a fourth series of races and built for the purpose a new boat, Shamrock IV. This series called for five out of seven races and were to be sailed in 1914. To meet the challenge Resolute was built by Herreshoff and about the time the challenger reached New York the declaration of war put a stop to all further activities in this direction. She was promptly hauled out and laid up for an indefinite time. It was not until July of 1920 that this series actually got under way and Shamrock IV was successful in winning the first race due to an accident to Resolute. The main halyard, a wire rope wound on a drum below deck was secured by expanding the end and sweating it into a knot. This pulled out and dropped the mainsail beyond the possibility of emergency repair. Shamrock IV was also successful in winning the second race in which she defeated Resolute by 2:26. The remainder of the series, however, was taken without a break by Resolute in which she defeated Shamrock IV by an ample margin in each of the three races.

This brings us right down to the present time and a new challenge by Sir Thomas Lipton who celebrated his eightieth birthday this year. Thirty-one years ago he issued his first challenge and built his first sloop, Shamrock, in the attempt to capture the cup. He was unsuccessful in his first attempt and has challenged on four different occasions prior to the present year which will make his fifth effort at this prize. At his great age he shows remarkable enthusiasm and is more ambitious in his attempt than ever before. Sir Thomas attributes his health and vigor to the fact that he has followed the sport of yachting for many years. This is how he keeps young as the sea has brought him joy and enthusiasm for many years. His newest boat, Shamrock V, in her early trials has shown every indication of being a thoroughbred and has been successful in all her trial racing.

To meet this latest challenge American sportsmen have built four fine sloops which are now engaged in a preliminary series of trial races which will ultimately result in the selection of one of the four as the defender which will meet Shamrock V. The official trial races to determine the defender will not be held until late in the summer, and the decison of the officials will not be rendered until the first part of September.

While the requirements call for all boats to be built to Lloyd's scantling rules, there are enough differences in line and weight to make the boats differ in performance. The American defenders are Weetamoe, designed by Clinton H. Crane and Enterprise, designed by W. Starling Burgess, both of which were built by the Herreshoff Manufacturing Company. Yankee, designed by Frank C. Paine, and Whirlwind, designed by L. Francis Herreshoff, were both built by George Lawley & Son Corporation. All of the boats are owned by syndicates of wealthy yachtsmen with the managers of the several boats as follows: Rear Commodore Morgan and George Nichols will look after the affairs of Weetamoe; Yankee will be in charge of John S. Lawrence, Frank C. Paine and Chandler Hovey; Whirlwind in charge of Paul Hammond and Landon K. Thorne, while Vice-Commodore Aldrich and Harold S. Vanderbilt will look after the destinies of Enterprise.

(*Continued on page* 152)



A chart of the courses off Newport. The inner series of triangular courses will be used on even numbered races, while the 15 mile windward and leeward courses will be sailed on odd numbered races. Course signals for each day will be flown from committee boat as determined by wind direction on that day

GRAY "8"

The Mightiest, Fastest, Marine Power Plant per Pound of Weight and Per Dollar of Price Ever Presented—

LAVISH claims were made for the Gray "Eight" when it was announced to the boating public. Claims Gray had never made for any other motor. And the glowing accounts of this mighty power unit in service have proven every claim made for it fully justified.

Gray "Eight" has swept the country and has scored a triumph.

Just get into a boat, Gray "Eight" powered. Know this new speed that literally pushes back the horizon before you and opens new worlds of happy adventure. Touch the throttle and feel the response and flow of power that gives owners a new sense of command of all they survey.

You live but once—live in a boat that makes a minute stretch out into distance. Write for the facts on Gray "Eight."

Gray makes a motor for every boat—20 great models—5 to 140 H. P.

Made in cruiser, cruiser reduction-gear, Hi-Speed and twin opposite rotation models.

140 H. P. with Downdraft carburetor in Racing Type, standardized power for Hacker 24-footer—35 m.p.h.

Develops 129 H. P. in Hi-Speed type.

Is under 60 inches in length. Is only 20 inches high above center of shaft. 3⅞" bore, 4½" stroke.

322 cubic inches displacement.

Weight 810 lbs.

$1115 to $1335, with built-in reduction gear.

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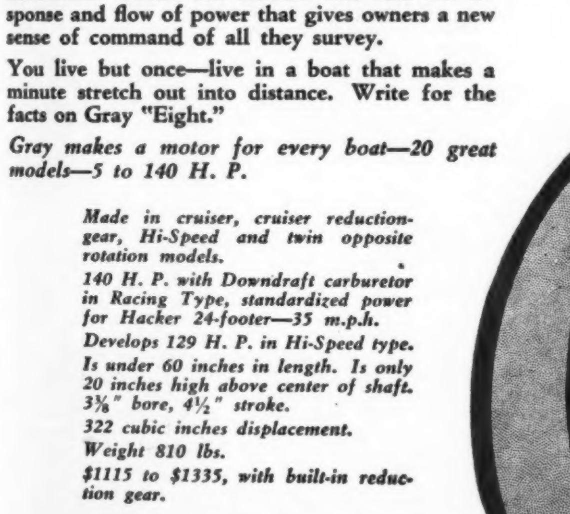


Gray Distributors: Bowler, Holmes & Hecker, N. Y. C.; Johnson & Towers, Philadelphia; The Richard Froboese Co., Seattle, Wash.; Gray Aldrich Co., Boston; Mahon & Gall, Baltimore; Charles E. Smith, Los Angeles; Thomson Machine Co., San Francisco. Others all over the world.

THE CANADIAN YACHTSMAN'S PARADISE

(*Continued from page* 51)

or coming about, and tacking the running free and other such language of the sea, and all the while you know perfectly well that they are trying frantically to remember which side of the boat is port and which is starboard. And then when they think they are so well versed in the terms it does upset them so when they mention perhaps having gone to leeward of another boat to hear one of the old timers say "Yes, I saw you beatin' to luard of her," and they wonder if they can ever make it sound like that. But long before the week is over they are talking like real old tars without any effort whatever.

But no matter how late the evening parties last, when the gun for colors goes at 8 A. M. the men are always on deck, and it is a pretty sight to see the burgees going aloft to the mastheads, and the many private flags up bow with the red or blue ensign astern. Then while you wonder how anything could be lovelier than this early morning on the river with the blue sparkling water, the graceful white yachts afloat, the green fields and wooded shores and misty hills beyond; and a feeling of utter contentment permeates your very soul, and you wax sentimental and lines of poetry begin to flit through your brain, "God's in His Heaven, all's well with the world," and things of that kind. When you descend abruptly to mundane things again brought hither by something most satisfying to both ears and nostrils—the sound of dishes chinking in the cabins, and that wonderful aroma, than which there is no more heavenly scent at early morning on the river, the smell of coffee and of frying bacon. You feel sure right then that beauty is not all in the eye of the beholder. And you descend promptly to your own particular cabin as the white mess flags swing gaily in the rigging of the different boats, to sit down to the yachtsmen's breakfast surely gives one a grand and glorious feeling, for the R.K.Y.C. boys are noted cooks, and even when there are ladies aboard the boys very often are the culinary mechanics.

To describe the beauties of the scenery as the fleet sailed along from day to day would be to write a book instead of this article, and even then man has no words to fitly describe the beauties of God in nature. But there is so much cool weather in New Brunswick's summer that the scenery along the rivers looks "Just about knee deep in June" the whole summer through, so deliciously green right up until the frost comes.

Along the upper Saint John there are beautiful fruit farms with their orchards sloping down to the river, men and horses working in the fields making hay, and breezes waft that wonderful fragrance of new-mown hay to us very frequently. Here and there cattle were grazing in marshy fields near the river, and the roads running like silver ribbons along the banks with the autos flashing along them. There are quaint old white farm buildings, barns and houses scattered along, many of them now very modern in their appointments, and wharves in more or less good condition where the river steamers stopped for freight or passengers.

Fredericton, the capital of New Brunswick, is situated on the Saint John River eighty-four miles from its mouth, where the river narrows down considerably, but is very beautiful with its winding way through the marshes and the banks are shaded by wonderful old elm trees. Only about fifteen miles from Saint John there is a particularly beautiful feathery elm tree on the shore that has long been called the Prince of Wales Elm, ever since King Edward admired it many years ago on a trip up this river when he was Prince of Wales.

Fredericton is a beautiful town with shady streets and fine old buildings, among these being the Parliament Buidlings and the University of New Brunswick in which seat of learning many famous sons of Canada received their early education.

The Belleisle is one of the most beautiful tributaries of the Saint John. Mile after mile of such a wonder world that no pen can adequately describe it. At the entrance there are wide marshes and islands dotted along, stacks of hay and grazing cattle, blue sparkling water in the narrow entrance channels as well as in the wider bays and stretches of river beyond, green fields and wooded hills—so many shades of green, the brownish green of standing hay, the duller green of fields just cut that will soon be bright with after-grass and clover, the blue-green of the oat fields and the yellow green of the buckwheat foretelling wonderful breakfasts of buckwheat pancakes next winter. The pale green of the hard woods—birches, beech, ash, maple and oak trees mingled with the dark shadowy green of the "Murmuring pines and the hemlocks," immortalized by Longfellow but really now for the greater part firs, spruces and cedar trees—here and there a flock of wild ducks in some sheltered cove where the fledglings are perhaps taking their early swimming lessons. And sometimes a deer or a moose running fleet-footed through all this loveliness. "And over all the sky, the clear and crystalline heaven. Like the protecting hand of God inverted above them."

One spot beloved of the yachtsmen for many years is Jenkin's Cove on the Belleisle. Once inside the entrance a much larger squadron could rest securely at anchor with no care for any wind that blows. It is a veritable fairyland. Only one or two farm houses visible set well back from the shore and just the woods and waters near at hand. Here the fleet usually spends at least one night during the cruise, for they feel that this is one of their own special harbors. Here too the cut-ups among the boys generally stage some of their best larks. And it is a lucky captain who finds nothing amiss with his ship after a night in Jenkin's. The tenders have a way of mysteriously disappearing leaving the crews marooned aboard, or the oars may not be found. Sometimes a captain wakes up in the morning to find that his boat has simply moved across the cove in the night, although his anchor is firmly holding in the new place just as it was in the old before he turned in, and no sound of creaking oars disturbed his peaceful slumbers. This year one captain was amazed to discover by early morning light a gay canoe lashed to his masthead. And he was still more amazed the next evening to find himself arrested by his fellow yachtsmen for having such stolen property in his possession. The mock trial that followed, beside the bon fire that night, while not disclosing the identity of the culprits made a very hilarious occasion, especially as the prisoner retaliated by charging the owner of the canoe storage rate on his craft for the night.

The Washademoak is another beautiful river running into the Saint John. The best way to appreciate its charming scenery and navigable waters, is to cruise along it in many kind of craft you may prefer. And then there is the Grand Lake with its great stretches of water, but quite shallow in many places so that it behooves the yachtsman to navigate circumspectly. There are beaches and coves and wooded points and summer camps, all adding to the picturesque beauty.

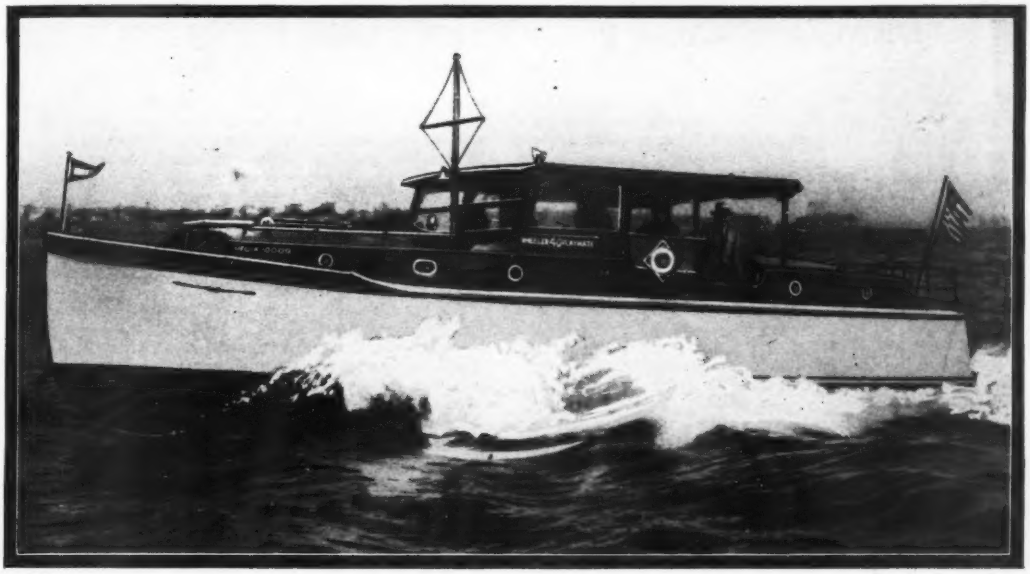
There are so many beautiful water-ways to sail on, and so many safe and sheltered spots to anchor in any weather, that the yachtsman could never exhaust the wonderful possibilities of New Brunswick rivers. More and more tourists are coming from all over Canada and the United States to enjoy the beauty and wonderful climate; and those who come to see remain to revel in this camper's paradise. It has been said "See Naples and die," in New Brunswick they say "See N. B. in camping time and live."

Along these rivers you will see tents dotted here and there, sometimes a whole row of them, some club or organization, boy scouts, girl guides or school classes, or lone tents with just a solitary occupant, far from the maddening crowd, or just a canoe overturned on the beach by way of shelter and a couple of boys skillfully manipulating a frying pan over a fire of sticks near by. The nights are usually cool enough for one to enjoy sitting around a camp fire, and good for the kind of a sleep that makes you wake up in the morning with that Up-and-at-'em feeling, and keeps you up, and at 'em all day long. Surely the kind of vacation one dreams of may be realized here, and one will still dream about it long after he is back at the city desk again.

This year the R.K.Y.C. cruise was ended by the usual service at Carter's Point. Here the chaplain the Rev. Dr. Morrison conducts the service and preaches from no costly pulpit but amid the grandeur of lofty trees overshadowing the sandy beach, with the entire squadron with dressed ship at anchor off shore, and here is where "You have known God in His splendor", a fiitting close to a glorious week on a glorious river as the orchestra and choir and vast congregation assembled there take up the strains of the R.K.Y.C.'s own hymn which begins

"O God Who made the mighty sea,
For yachts and crafts of all degree,
O Lord of all, we worship Thee
Let mercy be."

And when they close their service by singing "God Save the King," it is something to remember long, and even many who seldom go within the walls of a church take a reverent part. After the benediction the cruise is officially declared over, and once more a Happy Days cruise has passed into history.



"We *must have* THE FINEST HARDWARE *regardless*"

say the builders of the "PLAYMATE"

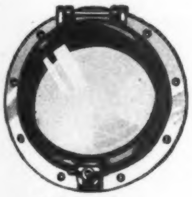


FIG. 5253
"*Sea-More*" *portlight-round*

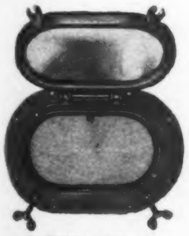


FIG. 5252
"*Sea-More*" *portlight-oval*

Established in 1847

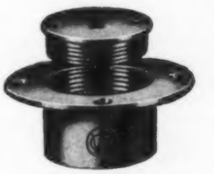
OBVIOUSLY, then, Wilcox-Crittenden Fittings are used on the famous "Playmate" sea skiffs and cruisers. Here's a statement by Mr. Wheeler of the Wheeler Shipyard — "We aim primarily to build a strong, safe and complete boat and in order to do this we must have the finest hardware."

The phrase *finest hardware* covers several points — reasons why so many boat builders today prefer W-C Fittings. First comes dependability — the name applied to W-C Marine Hardware for over 80 years. Then we have trimness and grace of line which harmonize with the craft of today. And finally, the new developments and improvements which are constantly made by Wilcox-Crittenden.

It will pay you to keep in touch with all these new features and new fittings. It's easy to do — and costs you nothing. Send for the 1930 Boating Manual and Catalog. It not only shows all the new W-C Items but also contains a wealth of information valuable to the boat owner . . . proper weights of anchors, hints on mooring, instructions in the care of boats, how to box the compass, rules of the road at sea and many other articles which make this book a reference guide you can't afford to do without — a book you'll use the whole 1930 boating season.

Send for your copy today, or ask your dealer to get it for you. Wilcox, Crittenden & Co., Inc., 4 South Main Street, Middletown, Conn.

FIG. 536
Round brass deck plate



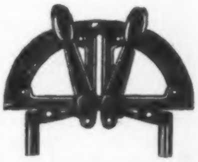


FIG. 8753
4B Bulkhead spark and throttle control

Wilcox-Crittenden *Dependable* Marine Hardware

DRAGON FLY, A FOURTEEN FOOT RUNABOUT

(*Continued from page* 61)

and painted is far more practical and far more beautiful than so much varnish. And then the bottom. This is really the important part of the job, yet most builders leave it more or less rough, slap a few coats of so called anti-fouling paint on it and call the thing finished. That's the wrong way. Make the bottom as nearly like glass in finish then give it one coat of ready mixed red lead paint well thinned out with turpentine and linseed oil; after this is throughly dry rub down with fine sand paper and give second coat somewhat thinner than first: repeat rubbing down. Now give three coats of bronze paint and rub this out well when applying, however allowing plenty of time for drying. Between each of the coats of bronze rub smooth with sand paper or steel wool. The top sides should be painted with the same care. If the hull is to be white use white paint for the priming coat; but if black use black, and follow out the same scheme for any colored paints that may be used. Canvas should be painted with flat paints only, just as soon as much oil is put on canvas the paint cracks, a little varnish mixed in the last coat will kill the dead flat tone and yet not make a slippery deck. Ice is the only thing I know of that is more slippery than varnished wood when it is wet.

Dragonfly should show a speed of very close to 25 miles an hour if she is powered with a motor of approximately 45 h.p. at 3,000 r.p.m. Of course the motor must be light in weight; having the same characteristics as the Lycoming and the others in its class.

You will notice that the sections below the chine are perfectly straight. I have made these thus because of the simplicity and because to all practical purposes the straight sections are equal to concave sections. Also you will notice that the keel projects below the planking for its full length, also that it remains parallel to the center line from station 2 to S, but tapers into the stem forward. One of the reasons for this is the matter of getting Dragonfly out of the water. These sharpened keels we see so often soon crush in, while that of this little boat will not, and it will be safe enough to roll the boat on lengths of 2 inch diameter pipe; of course keeping her on an even keel while doing so.

A ⅞ inch diameter bronze propeller shaft will be more than ample for the power installed, in fact this diameter is sufficient up to 100 h.p. at 3,500 r.p.m. The advantage of the small diameter shaft is the small resistance it presents while the boat is at speed coupled to which is the fact that the small shaft requires a small strut, and so long as the distance between the inside bearing and to strut bearing is not excessive there will be little whip, and the shaft will stand up very well. The strut will have to be specially made and next month in the second part of this article, I shall give a drawing of it. The same thing applies to the rudder. Look for these next month.

I find that the hull only of Dragonfly can be built locally for approximately $650.00; the hardware, motor, tank, steering wheel and the other fitting being extra. The elaborateness of the latter will determine the total cost of the boat.

All boat building begins with the plans, that is all boat building that is worth while. Of course folks will go ahead and build from models, and by eye, and by guess work and by God; and when the job is finally finished it lacks that something which makes it lovely. There are lots of these around; too many. It takes oodles of time to draw plans, and every plan is a development of its predecessor. Therefore mistakes are constantly being eliminated and you are pretty sure that after an architect has turned out a hundred designs or so that his boats will certainly be successful, both from a standpoint of performance and appearance. While on the subject of plans it will not be amiss to warn against making changes. Don't do it. Every week I have letter after letter asking the advisability of making some design longer, or wider, or deeper, or narrower, or higher. Or the letters ask about changing the location of the engine, the deck house or some other vital feature. For once and for all I say no to this. There must be a design somewhere that will suit your requirements; minor things can of course be changed like the dish lockers, location of stove, or sink or toilet.

MoToR BoatinG has published during the last fifteen years or so hundreds of plans of small boats of all kinds, sizes and types. Instead of writing me about alterations why not ask the editor to send you a list of all these plans and from this select one that fulfills your needs. The cost of the larger scale plans is very moderate; just address your inquiry to the Editor, MoToR BoatinG, 959 Eighth Ave., New York, N. Y. The drawings for Dragonfly are reproduced to a scale of ¾ inch to the foot. Many of MoToR BoatinG's books of designs and hints to builders will also prove useful. Send for descriptive circular. In the August number of this magazine I shall continue the story of the building of Dragonfly, look for it.

WIDOW—ANOTHER EASY ONE

(*Continued from page* 60)

the bottom between the heels of the frames at this station. There is also a similar bulkhead at the forward end of the engine compartment.

The deck beams will be made from ⅞ by ½ inch white oak and will be set one on each frame, and two between as shown on the deck frame plan. Support for the ends of the deck beams will be supplied by the ⅞ by 2 inch yellow pine shelf that runs the full length of the boat. This shelf will be fastened to the frames with long screws.

The deck will be covered with ¼ inch plywood. This can be nailed down using galvanized lath nails for fastenings. The plywood must be given two coats on the underside before it is fastened. And of course must be painted outside before the light weight canvas is applied. The canvas must be stretched on before the coamings or the slides for the hatch are fitted. It will be tacked along the sheer with small copper tacks, later to be covered with ⅞ inch half round moulding. I should lay the canvas while the paint on the plywood is wet.

Figure 6 shows a section of Widow at the engine. It will be noticed that there are three cross members extending from chine to chine. These will be fastened with screws having their heads outside the planking. Rather heavier screws than the rest can be used through the keelson and rub strips. And also through the chine logs. Leave a small opening each side of the keelson to permit bilge water to flow fore and aft. The bed logs should be through fastened to the cross members. There is one big advantage in these stern drives, and that is the engine can be set level. Undoubtedly the power output is greater when the engine sets thus.

The coaming will be made from ½ inch mahogany; the forward end will have to be steamed to make the sharp bend shown. It will be screwed to the deck beams and carlins.

The hatch aft over the engine will be made with mahogany rails having a groove cut the full length inside to take sliders on the under side of the carlins. The latter will be made from white oak 1¼ by 1¼ inches. The top will be made the same as the deck and covered with canvas. The moulding over the edge of the top will be ⅝ by 1 inch. This will project down over the joint between the slide and the rails, making a tight joint.

You will note that there are several places on the deck which showed doublings; these are placed under the deck plywood as reinforcements in the way of cleats, flag pole sockets, etc. They, of course will be fitted before the deck is laid.

The seats will be made and placed as shown. These will be made from ⅝ inch cedar and must have strong backs under as shown. The lazy backs will be all right if made from Masonite or plywood.

All the things I said about equipment in the companion article on Dragonfly apply to Widow. Here we have watertight compartments and sinking is very improbable so you will not require the life raft I mentioned. I have been on several small motor boats that through some means or other got bad leaks; one was a 40 foot racing boat with a lot of engine weight. When full of water she floated awash; but was hard to keep on an even keel. With a water tight compartment each end she would have had sufficient flotation to bail out and I believe could have been patched up with canvas and have been towed home. However she didn't. So you will be fortunate in Widow and can feel a real sense of security when under way in her.

The new boat next month will be a surprise.

In the meantime if you decide to build Widow drop a line to the Editor of MoToR BoatinG, 959 Eighth Avenue, New York, N. Y., in connection with blue prints drawn to a scale of ¾ inch to the foot; these can be had at moderate cost and are worth it. Also send for the descriptive circular of books of the Ideal series which contain many numerous interesting small boat designs and hints for the amateur builder.

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(*Continued on page 78*)

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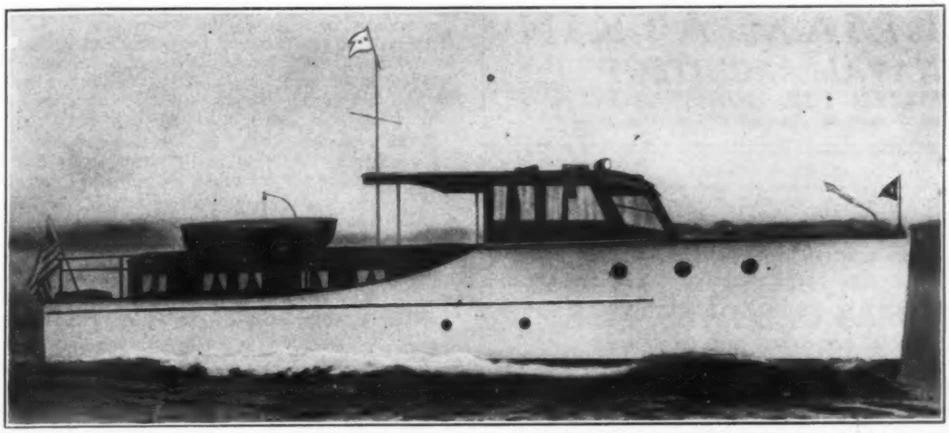

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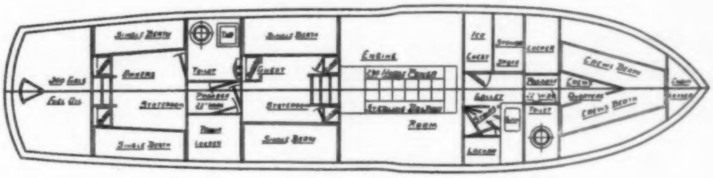
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Single Berth
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A JUNIOR RUNABOUT ENGINE

(*Continued from page* 56)

place of a flywheel and eliminates the gears and pinions otherwise needed in a conventional two unit electrical system.

The oil cooler is mounted on the side of the cylinder block, the shell or body being integral with the core opening cover for the cylinder casting. In this cooler, the oil flows through the tubes and the water around them—the exact reverse of the usual procedure. This method was adopted to prevent water being trapped in the cooler by capillary attraction when the engine is drained and causing damage during freezing temperatures. The core of the cooler can be easily and quickly removed for cleaning.

A Joe's reverse gear of special design is built into the engine and completely enclosed. Adjustments to the clutches are easily made by taking off the cover plate on the gear housing.

A stuffing box prevents leakage around the tail shaft and an annular ball bearing takes up the propeller thrust. In place of the customary engine sleeve generally supplied by the reverse gear manufacturer, an integral extension of the crankshaft carries the main drive pinion, shortening the engine considerably and making a more rigid drive.

Water is supplied by a gear pump, running at half engine speed. The body and gears are bronze and shafts are stainless steel. No bolts or studs are required to attach the pump to the engine. The driven end of the pump body is turned to fit a bored hole in the side of the cylinder block and is prevented from rotating by means of a set screw. The end of the shaft is squared and fits into a corresponding squared hole broached in the drive shaft. By loosening the set screw and disconnecting the water hose, the pump can be quickly lifted out of its position for inspection or repairs. Water is admitted at the upper side of the pump, thus maintaining a supply in the body when the engine is stopped, and keeping it continually primed.

No other feature contributes so much to the satisfactory performance of a marine engine as proper manifolding. In working out the design of the engine, the Lycoming engineers gave this important matter especial consideration. All gas passages are cast within the cylinder block, and are completely surrounded by water jackets except where the exhaust and intake walls coincide to form a hot spot. The intake being above the exhaust, the heavier end points of the incoming gas, settling to the bottom wall are quickly heated and vaporized by the exhaust which comes in direct contact with the same wall. Much of the unusual performance can be attributed to the efficient manifolding and method of gas distribution. The exhaust outlet is regularly at the rear of the cylinder block, but if it is desired to take it from the other end, it can be quickly done by exchanging the exhaust elbow with the front cover plate, and making a slight change in the water outlet. All water is discharged into the exhaust line through a long nozzle projecting far enough into the exhaust elbow to prevent water being drawn back into the cylinders when the engine is stopped.

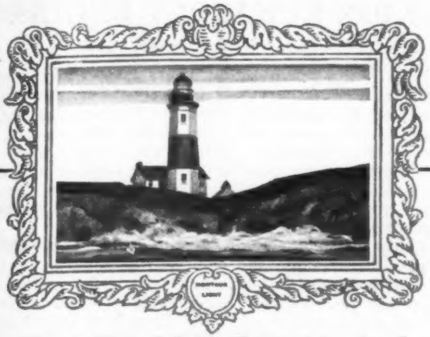
The crankshaft is carried in three main bearings 1⅞ inches in diameter: the front and rear being each 1⅝ inches long and the center 2 inches long. These are bronze backed, babbit lined. Connecting rod bearings are white metal, permanently spun into the steel forgings, and are 1¾ inches in diameter and 1½ inches long.

Lubrication is by pressure to the main and camshaft bearings. Crankpin bearings are oiled through passages drilled in the crankshafts. Cams and tappets are sprayed with oil thrown from small jet holes drilled in the connecting rod bosses and registering once during each revolution with the holes drilled in the crankshaft. Oil leads to all the bearings are drilled through the crankcase webs. The pump is driven from the camshaft by spiral gears at one-half engine speed. It is submerged into the pump and is self-priming. A screen strains the oil and protects the pump and the bearings to which the oil is fed. An adjustable pressure regulator is conveniently located at the side of the engine. Valves are of exceptionally large size for so small a bore. Exhausts are silchrome steel 1¼ inches diameter in the clear and have 5/16 inch lift: intakes are of alloy steel and are 1⅜ inches clear diameter and have 5/16 inch lift. The angle of the valve seats is 45 degrees. Tappets are of the mushroom type fitted in two clusters of four each. A large opening in the side of the cylinder, normally closed by an aluminum cover, permits ready access to the tappets to make adjustments. A feature of the design is that no accessories need be dismounted so the tappets can be reached with adjusting tools.

The drop forged camshaft runs in three bearings of liberal size. Cams are forged integrally and are formed with a quieting curve, eliminating the tappet clicks so frequently found in marine engines.

There are but three timing gears in the engine. These are

(*Continued on page* 82)



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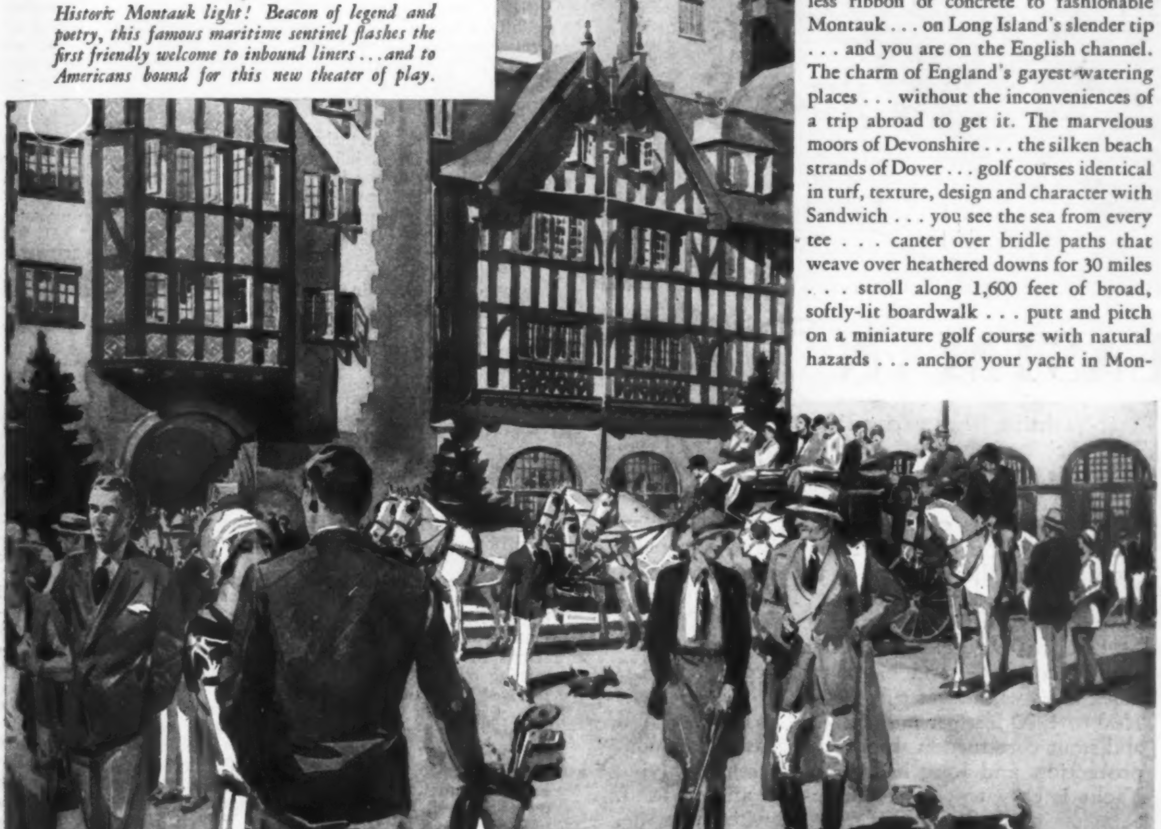
England . . . 120 miles away



Take a de luxe express from New York or motor leisurely or swiftly over a gapless ribbon of concrete to fashionable Montauk . . . on Long Island's slender tip . . . and you are on the English channel. The charm of England's gayest watering places . . . without the inconveniences of a trip abroad to get it. The marvelous moors of Devonshire . . . the silken beach strands of Dover . . . golf courses identical in turf, texture, design and character with Sandwich . . . you see the sea from every tee . . . canter over bridle paths that weave over heathered downs for 30 miles . . . stroll along 1,600 feet of broad, softly-lit boardwalk . . . putt and pitch on a miniature golf course with natural hazards . . . anchor your yacht in Montauk's marvelous basin and focus your glasses on the International Cup Trials to be held off Montauk in August . . . troll a wicked spoon for tuna, swordfish, bluefish and bonita on the blue Atlantic . . . or slip away for a rendezvous at the Island Supper Club. Vibrant recreation or idyllic repose—make your mood at Montauk! And in an architectural setting that mirrors the glories of the Tudors, rises the magnificent Montauk Manor, regal in its cuisine, service and appointments. Why not summer at Montauk? Make your reservation now at the Montauk Manor or write for descriptive literature . . . Montauk Beach Development Corporation, Montauk, Long Island, New York Office, 450 East 52d Street, Telephone Plaza 0783.

montauk beach

ON LONG ISLAND'S SLENDER TIP

A New Sport awaits you!

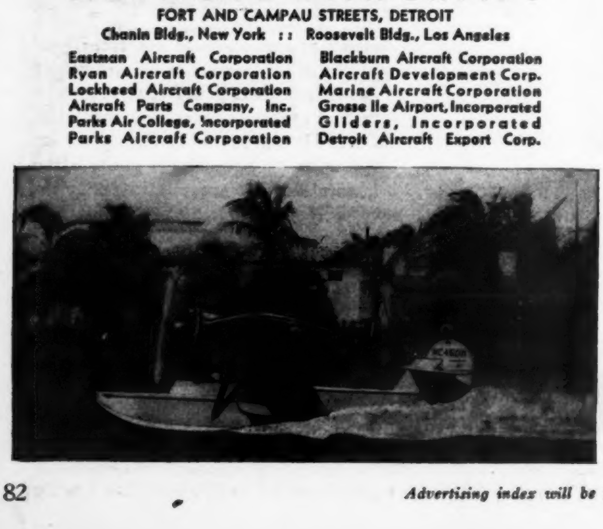
NC460M
EASTMAN
Flying Yacht
DETROIT AIRCRAFT

EASTMAN Flying Yacht

"Air-Yachting" has arrived! This exciting new pastime is Eastman's contribution to the world of sport. Now you can enjoy the thrills of speedboating and flying—combined! ¶ The Eastman Flying Yacht is equally "at home" on the water or in the air. With it you can race the fastest speedboats . . . take the air and leave them far behind . . . cruise the skies at 90 m.p.h. —112 open throttle. ¶ The Eastman accommodates four in comfort—and has a range of 300 to 400 miles. It leaves the water in 8 to 12 seconds—climbs 1000 to 1200 feet per minute. And its all-metal hull and stout construction throughout assure maximum protection and long life. ¶ The Eastman Flying Yacht is easy to fly—to take off and to land. Send for our catalog. Dealers are invited to write.

DETROIT AIRCRAFT
FORT AND CAMPAU STREETS, DETROIT
Chanin Bldg., New York :: Roosevelt Bldg., Los Angeles

Eastman Aircraft Corporation
Ryan Aircraft Corporation
Lockheed Aircraft Corporation
Aircraft Parts Company, Inc.
Parks Air College, Incorporated
Parks Aircraft Corporation
Blackburn Aircraft Corporation
Aircraft Development Corp.
Marine Aircraft Corporation
Grosse Ile Airport, Incorporated
Gliders, Incorporated
Detroit Aircraft Export Corp.



A JUNIOR RUNABOUT ENGINE

(*Continued from page* 80)

wide face, helical cut. Each set of gears is specially selected for quietness. The crankshaft gear is steel, and meshes with a cast iron gear on the camshaft, which in turn meshes with a cast iron gear on the pump and time shaft. The rear of the timing gear cover is provided with a pin, which, when unscrewed and inserted in the hole in a reverse position, will drop into a hole drilled in the camshaft gear and locates the top dead center of the piston in Nos. 1 and 4 cylinders, in case it should become necessary to retime the ignition.

A Delco-Remy distributor with full automatic spark advance is mounted at a slight angle and driven by spiral gearing from the pump drive shaft, on the starboard side of the engine. By locating it in this position, the over-all height of the engine is reduced several inches and permits installing in a limited space.

Pistons are of aluminum alloy with invar struts. Three rings are fitted—two of them being compression rings and one an oil regulating ring. Piston pins are ¾ inch diameter and are clamped in the connecting rod, the bearing being in the pistons. Rods and pistons are matched into sets of equal weight, the permissible variation being not more than one-eighth of an ounce.

Standard S. A. E. tachometer take-off, running in a clockwise direction at one-half engine speed, is located at the rear of the timing gear housing. Thermo-gauge connection is placed in the cylinder head near the water outlet.

Standard equipment includes Owen Dyneto starter-generator, special Joe's gear, Delco Remy distributor and coil, A C fuel pump, Schebler Model T carbureter and A C flame arrester.

Overall length from front of generator housing to center of propeller shaft coupling is 36½ inches; overall width is 16¾ inches and height above crankshaft center line is 17½ inches. The maximum depth of the oil pan is 8½ inches. Completely equipped, the engine weighs 390 pounds.

A VISIT TO THE NEW DODGE FACTORY

(*Continued from page* 57)

spent the afternoon on the waters of Hampton Roads witnessing the return of President Hoover and the American battle fleet from maneuvers off the Virginia Capes. Dinner at the Chamberlin-Vanderbilt was followed by a trip across Chesapeake Bay by steamer and return by Pullman to New York.

The party found the Dodge factory, as one editor expressed it, "literally spouting boats." Approximately 400 boats, representing all of the six Dodge runabout models, were in various stages of production. The plant, employing over 700 men, is turning out forty boats a day, in order to catch up with orders received from all over the world since the National Motor Boat show. Of this production approximately two-thirds are of the 16-foot, 40-horsepower, 30 miles-an-hour model.

Among those who were present at the inspection party were C. F. Chapman, of MoToR BoatinG, Herbert Stone, of Yachting, William Crosby, of Rudder, Archie Brayden, of Manufacturers Record, F. H. Innes, of Automobile Topics, J. Geschelin, of Automotive Industries, H. Clay Foster, of Boating Business, Ira Hand, secretary of the National Association of Engine and Boat Manufacturers, John H. McCormick, president of the Lycoming Motor Company, G. Fred Fletcher, George W. Sutton, Jr., Frank Wigglesworth, J. E. Wilkinson and distributors and dealers from widely separated points along the Atlantic seaboard, the Mississippi River, the Great Lakes and Canada.

PHILADELPHIA DISTRIBUTOR FOR MAXIM

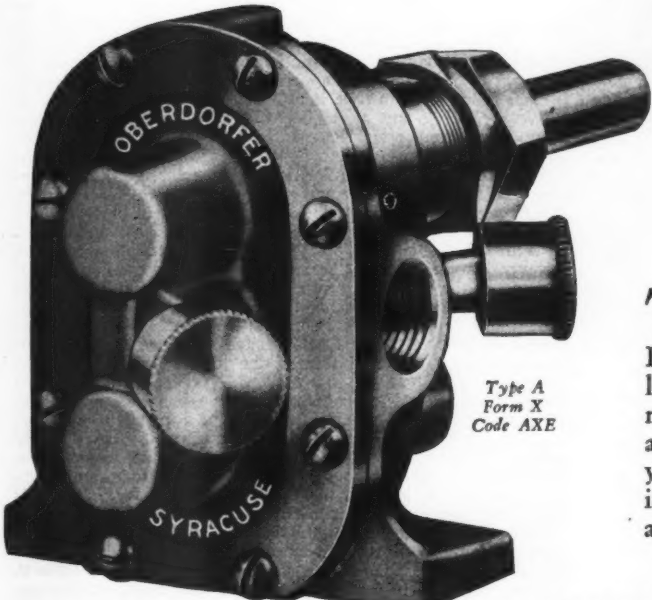
The Marine Equipment & Supply Company of 116 Wal Street, Philadelphia, who are already distributors for Chris-Craft all-mahogany motorboats, and manufacturers of marine hardware, engines, and specialties, have been appointed distributors for Maxim silencers.

A complete stock of the latest model M-2 Maxim silencer for motorboats is now on hand to serve marine dealers, boatbuilders and boat owners throughout their territory.

The slogan of the Marine Equipment & Supply Company Boats—and Their Complete Equipment, and the addition of the new 1930 M-2 Maxim silencers to their line is in keeping with the slogan.

The Marine Equipment & Supply Company also report the addition of L. H. Kinnard, president of the Bell Telephone Company of Pennsylvania to their rapidly increasing list of prominent Chris-Craft owners. Mr. Kinnard will use his Chris-Cra on his private estate in the Pocono Mountains of Pennsylvan

Don't let your MOTOR develop — HEART TROUBLE !



Type A
Form X
Code AXE

OBERDORFER BRONZE GEAR
CIRCULATING PUMP

Available in various types, forms and sizes for any make or model of marine motor or for conversions.

AN Oberdorfer Bronze Gear Circulating Pump is easily installed and greatly helps the efficiency of your motor. There's no pump like an Oberdorfer Pump—with a record of years of dependable service on motors in boats all over the world—under all kinds of conditions.

Oberdorfer pumps are made of non-corrosive bronze *throughout*. The shafts are of finest Tobin bronze, run on extra large, fully lubricated bearings—exclusive Oberdorfer features.

Oberdorfer Circulating Pumps are used as standard equipment on some of the best marine motors.

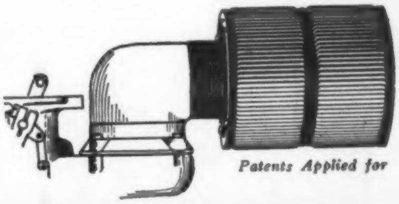
Stocked by leading marine supply dealers everywhere.

M. L. OBERDORFER BRASS CO.
2200 Thompson Road Syracuse, N. Y.

THE circulating pump is the heart of your motor. An Oberdorfer Bronze Gear Pump assures proper circulation and smooth functioning. If your motor is laboring under the handicap of a worn-out, inefficient circulating pump, you are laying yourself open to overheating of the motor, scored cylinders, damaged valves and all kinds of trouble.

SAFETY
FROM BACKFIRE

is assured by the Oberdorfer Backfire Trap. Take no chance on a fire starting from a backfire.

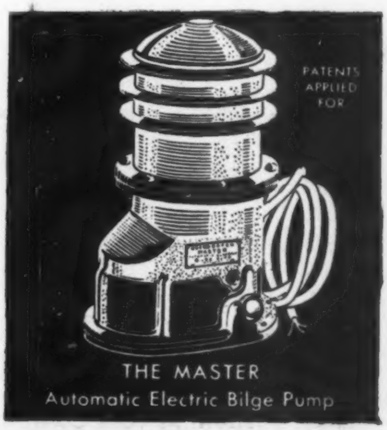


Patents Applied for

SAFETY
FROM BILGE-WATER

The "Master" Automatic Electric Bilge Pump frees you from the danger and annoyance of bilge-water accumulations. In 6, 12 and 32 volt units.

Write for full details about the complete Oberdorfer line which included motor driven gear and centrifugal pumps and hand bilge pumps.



THE MASTER
Automatic Electric Bilge Pump

Oberdorfer Pumps

Peel Glider Boat being towed by Dodge Sixteen-Footer

Soaring bird flight . . . without noise or discomfort . . . thrilling but safe . . . now awaits you in a PEEL GLIDER BOAT towed by your runabout. Send for an illustrated folder and full details of this *two-passenger* glider.

LET US ARRANGE A DEMONSTRATION FLIGHT AT YOUR CONVENIENCE

PEEL GLIDER BOAT
CORPORATION

110 East 42nd Street, New York
Caledonia 0660

A HALF CENTURY OF BUSINESS

(*Continued from page* 58)

partnership in 1849. After various changes in partnerships, my father formed the present Wilcox, Crittenden & Co., in 1869 with E. B. Chaffee, A. R. Crittenden and Homer Churchill for the manufacture of sailmakers' supplies and marine hardware.

"As I have said, the business started with grommets. Gradually the company added new items to its production . . . thimbles, hooks, clews, cleats and similar hardware for sailing vessels and riggings. From these the concern branched out into equipment for the making of boats, manufacturing shackles, turnbuckles, anchors and other products confined largely to galvanized iron. The use of brass was almost unknown fifty years ago and developments in this metal came about some years later when private yachts became popular."

Asked what single factor he considered had most affected the marine hardware business during his lifetime, Mr. Wilcox replied: "The application of power to boats. Along about 1895 the business was completely revolutionized by the development of motor boats. It did not happen over night. Rather it was a gradual process but in time it radically changed the business. It required courage and an ability to swim back when the first motor boat enthusiasts ventured forth in their naptha launches. Fires and explosions were common occurrences. But with the advent of the internal combustion engine and its constant improvement, motor boating jumped ahead with tremendous strides.

"The next greatest single influence to change the complexion of the business was the development of the outboard motor.

"With all the changes and growth in the boating business, however," went on Mr. Wilcox, "and the expansion of our business in the past half century, I still think of it in terms of individual customers, and that thought I have endeavored to instill in the minds of my associates including my son William Walter Wilcox, Jr., and Phelps Ingersoll, general manager of the company. I suppose that is due to the inspiration of my father and uncle. In my impressionable years when fresh from college I entered the business, I greatly admired their capacity for making business friendships. Business to them was personal and enjoyable. In view of the enormous increase in the number of Wilcox-Crittenden customers . . . in view of the complexity of 1930 methods I must admit that to maintain personal contacts is a much more difficult task today. But I do know that I enjoy nothing more than my many delightful associations with the men in the marine hardware field through trips, conventions, boating events, etc. Business today, in spite of its complexities, is still between individuals and I value as Wilcox, Crittenden & Company's greatest asset its business friendships throughout the entire country."

PROVING THE STOCK RUNABOUT'S ABILITY

Richard H. Brown of Boston has recently returned to the Hub City after a voyage in a 26-foot Dart speed boat that would have tested the courage of the hardiest mariner.

Mr. Brown, who represents the manufacturers of Dart Runabouts as New England distributor, left Boston at 6:30 one Saturday morning driving a 26-foot open runabout which was to be exhibited at the Portland, Maine, Boat and Sport Show, which opened on the following Monday. It was impossible to find transportation for the boat between Boston and Portland which would assure its arrival at the exhibition building in time. Against the advice of sea-faring people, and in the face of a gale that stopped even the biggest coastwise ships, Brown set out from Boston in this comparatively small open speed boat. His power was a 225 h.p. valve-in-head Kermath engine.

She weathered the seas beautifully and all went well until a point off Gloucester, Mass., was reached. At this point a submerged log was struck with such force as to damage the propeller. With time still the most important thought in his mind, the driver put in at Gloucester, had a new propeller put on and resumed the passage to Portland.

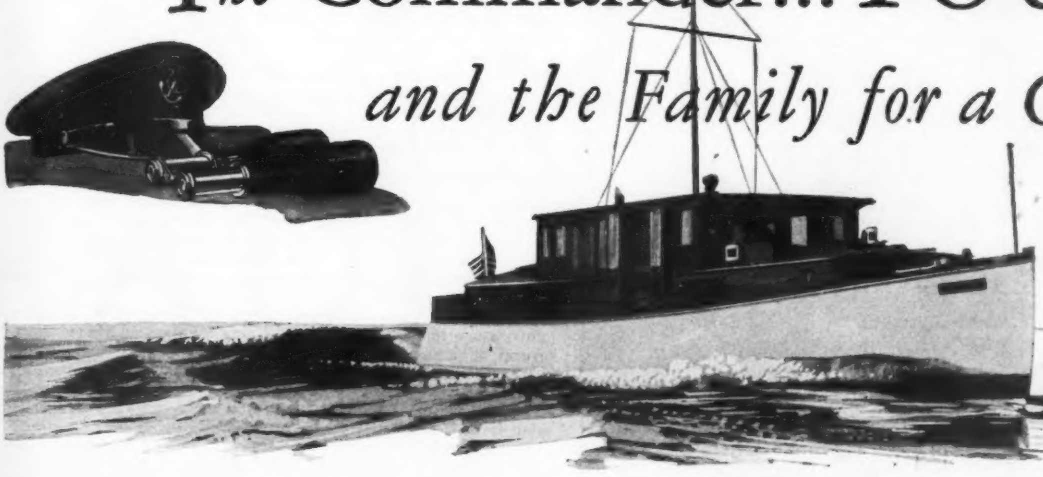
The wind was blowing a veritable gale at this time, but the Dart continued to fight her way through the water at the best speed she could make. It was a case of keeping on top of the water so Brown kept driving her.

Later in the day a serious problem presented itself when the supply of gasoline in the tanks became exhausted. The driver had prepared for just such an emergency by bringing along a reserve supply of gasoline, but he was faced with the danger of swamping the boat when she went broadside to the sea.

Taking the chance, he poured fresh fuel into the tanks and then was under way again. Pushing his way through towering seas which constantly threatened the safety of the boat, Brown finally made Portland in the afternoon where the Dart was immediately removed to the Exhibition Building for the Boat and Sports Show.

The Commander...YOU!

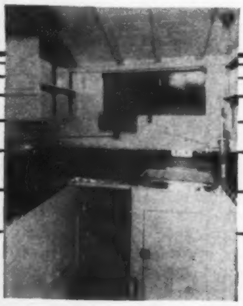
and the Family for a Crew



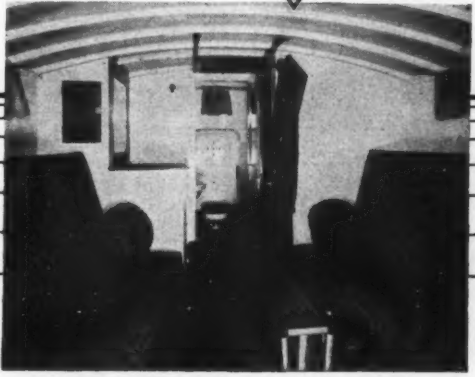
The ownership of a husky, smartly designed, staunchly built Matthews Cruiser is the high road to greater happiness and contentment. Combine sport with pleasure, health with happiness for yourself, and your family! There's relaxation, intimate companionship, marvelous entertainment, social prestige, if you please, to be found in Matthews ownership. Thousands of miles of enjoyment and years of owner usefulness are built into each one of the ten handsome "38" and "46" Matthews models. Fishing trips, week-end cruises to out-of-the-way spots, intimate parties with your friends, an entire summer's vacation spent afloat—these and a hundred other social delights are offered you today in Matthews ownership. If you're still in doubt ask any old-time yachtsman his opinion of Matthews comforts—Matthews sturdiness. It won't take you long after testing Matthews performance to discover why Matthews are the most popular stock cruisers afloat—why they are seen everywhere in every kind of weather. Write for the complete details today.

From $6850 afloat Port Clinton—
ready for your summer cruising.

THE MATTHEWS COMPANY
Builders of Boats of Distinction . . Since 1890
PORT CLINTON . . . . OHIO



Feminine approval is won immediately by the excellent galley-kitchen—with its neat arrangement, large stove, sink and drainboard and the adequate cupboard spaces afforded

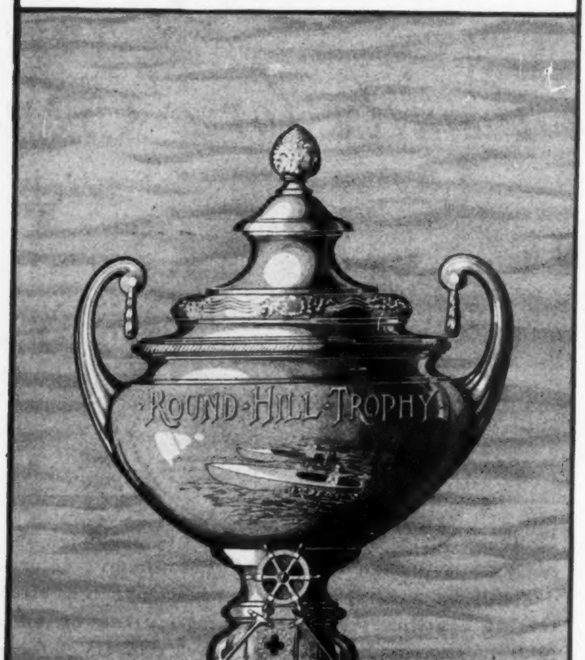


No other cruisers built provide such unlimited spaciousness as that found in the well lighted, well ventilated cabins of Matthews 10 cruiser models. Beautifully appointed for daytime use, they are converted into luxurious sleeping quarters to accommodate four, six or eight passengers in the utmost privacy

Nautical to the nth degree, Matthews designers have nevertheless achieved singular comfort and homelike graciousness in the large bridge deck house of the double cabin Matthews series

SALES AND SERVICE—The Barret Co., 112 Second St., Louisville; Belle Isle Boat & Engine Co., 8777 E. Jefferson Ave., Detroit; Boardman & Flower, 1740 Van Ness Ave., San Francisco; Bruns, Kimball & Co., Cor. 5th Ave. and 15th St., New York City; Wm. V. Masson, 1619 Baltimore Trust Bldg., Baltimore; Matthews Florida Branch, 17 McAllister Arcade, Miami; Mississippi Valley Yacht Sales, Times Bldg., Alton, Ill.; Walter H. Moreton Corporation, 1043 Commonwealth Avenue, Boston; Sampson Electric Co., 3201 South Michigan Avenue, Chicago; J. A. Scarlett, 436 East 2nd Street, Cincinnati; R. Sealy, Commerce Building, Galveston; Robert V. Staats, 675 South Park View, Los Angeles.

Round Hill Trophy
For Outboard Motors



Round Hill Trophy
Total Height, 36 inches
Presented by Col. E. H. R. Green to the New Bedford Yacht Club
For Competition, July 28th and 29th
Designed and Made by
J. E. CALDWELL & CO.
PHILADELPHIA

THE VALUE OF AN INDICATOR

(Continued from page 65)

temperature indicating instruments would call for several units, perhaps one per cylinder. Each would be so placed as to indicate the temperature of the jacket water that has just passed over and cooled its particular cylinder. Such practice is common in large installation, where the supply to each cylinder is separately controlled. For our purpose, however, only one instrument would be provided. This should be located in the pipe that carries the water leaving the engine. This is ordinarily taken from the cylinder head jacket. If a water cooled exhaust manifold receives the water after it leaves the engine, the thermometer bulb should not be located in the pipe that carries water away from the manifold. The instrument should be put as close as possible to the engine.

The type of temperature indicator most adaptable to small cruisers comes fitted with a sensitive bulb at one end of a flexible tube that connects with the instrument. The bulb is screwed into a properly chosen fitting, usually a Tee that forms part of the water piping. The indicating dial should be located on the instrument panel where it may be watched by the person operating the engine.

In the illustration is shown a piping layout that allows the temperature to be controlled by a single valve. This system has several advantages over other systems.

When a single valve in the pump suction pipe is used for regulation, there is some danger of breaking the suction and losing the water supply. Also the pump is heavily loaded if the valve is shut very much.

A single valve in the pump discharge pipe causes an additional and unnecessary load on the pump and its drive.

A single valve in the water outlet pipe backs up an excessive pressure in the system, not only loading the pump unduly, but straining the gaskets, pipe connections, and hose connections so that there is greater difficulty in keeping them tight.

With the system illustrated the circulating pipe may be carried up to the control position so that the regulating valve will be readily accessible to the operator.

Such an installation of necessity gives only an approximate indication of the water temperature at the vital spots. But the greatest advantage lies in having this means to detect trouble. An abnormal rise in temperature indicates that something has happened that requires immediate attention. Such a warning that is heeded may prevent serious damage with its attendant loss of time and use of the craft while repairs are being made.

M. H., Brooklyn, N. Y.

FOR CORRECT TEMPERATURES

FROM its very name, internal combustion engine, the modern power plant seems entitled to a heat indicator as standard equipment. Low cost, ease of installation, and dependability are factors underlying the popularity of the special types of thermometers marketed for this purpose.

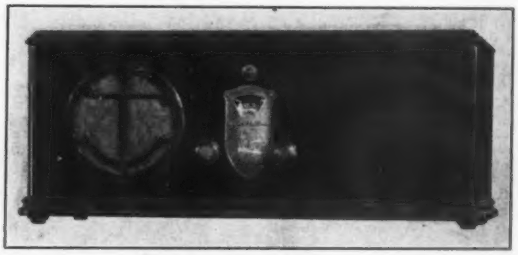
The instruments generally recommended for marine engine installation are known as extension or distance types and have a common round dial and pointer type of scale, graduated in degrees and actuated through expansion and contraction of an alcoholic mixture within a copper tube leading to a water jacket, header, or tank of the cooling system. The bulb or contact end of the tube is submerged in the circulating water. Temperatures of different motors and different parts of the same motor vary considerably, and the installation should be made at a part of the system where the water attains its maximum temperature (generally 160 to 190 degrees). An upper portion of a water jacket, jacket plate, or header is best, both for thermal conditions and cleanliness, as sludge, lime, and other sediment settle at the bottom of the jackets or piping. Such foreign matter might insulate the contact bulb and render the action on the fluid in the tube sluggish and inaccurate. If there is a thermostat in the system, the heat indicator bulb should be placed a considerable distance away from it, because sudden changes in the water temperature when the valve opened and closed might cause extreme fluctuations on the dial and suggest serious overheating.

The flexible metal tubing or hose leading to the dash-board or instrument panel should be kept away from exhaust manifolds, which would produce abnormally high readings, and also out of the way of carbureter or ignition units needing occasional adjustment or repairs. During an overhauling, it had best be removed entirely and carefully stored. When installing, the hole through jacket or header should be carefully punched, drilled, and tapped with good tools. If the boatman wants to verify the accuracy of his heat gauge, he can heat a pan of water to the boiling point on the galley stove, allow it to cool a minute or two, and submerge the bulb in the pan. The reading on the dial should be within a few degrees of 200.

With experience, the motor boatman becomes accustomed to

(Continued on page 96)

BOSCH
MOTOR BOAT RADIO



The famous Bosch Radio for the home now has a counterpart in Bosch Motor Boat Radio. This newest Bosch Radio model has all the superior quality features, all the advantages of clear, perfected reception, keen simplified tuning and freedom from distortion, and other features that have made Bosch Radio universally praised.

It is a screen-grid tube receiver, designed by Bosch Radio engineers for successful operation on any type motor boat. Bosch Motor Boat Radio sells readily on demonstration, every boat owner realizes the increased enjoyment it will bring to him.

Bosch Radio is licensed under patents and applications of R. C. A., R. F. L. and Lektophone.

BOSCH MODEL 84 RECEIVER
Cabinet Model, Price $80 less tubes.

AMERICAN BOSCH MAGNETO CORPORATION
SPRINGFIELD, MASSACHUSETTS

Branches: New York Chicago Detroit San Francisco

1. Materials and design of set make it resistent to effects of moisture and salt air.
2. Compact unit with built-in speaker.
3. Five tubes, 4 of which are screen-grid, give exceptional sensitivity.
4. This receiver operates from motor ignition battery and "B" batteries.
5. Circuit designed for low current consumption and long "B" battery life.
6. Is furnished with special shielded "lead-in" to prevent pickup of ignition interference from motor by antenna.
7. Set carefully shielded for same purpose and can operate while motor is running.
8. Shielded battery wire and interference "suppressors" also furnished with set.
9. Speaker connections are provided so extra speaker can be used on deck or wherever desired.
10. Uses short aerial which may be fastened under molding along edge of cabin.
11. Illuminated dial and single tuning control.

COUPON

American Bosch Magneto Corp.,
Springfield, Mass. MB-7

Please send me details of Bosch Motor Boat Radio.

Name ....

Firm ....

Address ....

kill River for $6000 Sir Thomas Lipton trophy.

August 16-17—Canoe championships of Eastern Canoe Association, and Outboard and Speedboat Regatta, of Anchor Yacht Club, Bristol, Pa.

August 23—Annual Class Race to Tren-

CALENDAR OF COMING EVENTS

(*Continued from page* 26)

ton, starting 2 P. M. from Keystone Y. C., distance 25 n.m., finishing Trenton Y. C.

SOUTH JERSEY EVENTS

Martin N. Fritsch, Box 325,
Mays Landing, N. J.

July 4—Chestnut Neck, N. J.
July 5—Lu Lu Yacht Club, Atlantic City, N. J.
July 12—Wildwood, N. J.
July 19—Cape May, N. J.
August 2—Port Norris, N. J.
August 3—Avalon, N. J.
August 9-10—Stone Harbor, N. J.
August 16—Brigantine, N. J.
August 23—Ocean City, N. J.
August 30—Margate Longport, N. J.
September 1—Lower Bank, N. J.
September 6—Mays Landing, N. J.

CALIFORNIA REGATTAS

A. L. Bobrick
111 Garey St., Los Angeles, Calif.

July 4—Alamitos Bay, Long Beach, Calif.
August 10—Balboa, Calif.
September 9—Admission Day—Lake Merritt, Oakland, Calif.
November 29—Salton Sea, Calif.
December 6-7—Lake Elsinore, Calif.

ADIRONDACK REGATTA CIRCUIT

H. C. Eckert, Box 208, Saranac Lake, N. Y.

July 3-5—Albany Boat Club.
July 12—Canajoharie, N. Y.
July 19-20—Troy Motorboat & Canoe Club.
July 23-24—Speculator, N. Y.
July 26-27—Clayton, N. Y. (Thousand Islands).
Aug. 2—Long Lake Boat Club.
Aug. 2-3—Iroquois Yacht Club, Lachine, Quebec.
Aug. 5—Tupper Lake Speed Boat Club.
Aug. 8-9—Saranac Lake & Waterways Club.
Aug. 11—Lake Placid Boat Club.
Aug. 13-14—Rouses Point Boat Club.
Aug. 16-17—Westport Yacht Club.

A NEW POCKET TIDE TABLE

The U. S. Coast and Geodetic Survey has issued a small tide table, of memorandum pocket size of New York Harbor. The table includes the predicted time of high and low water for every day in the year at Governor's Island and shows tidal differences and ranges which enable the determination of corresponding predictions for other places in New York Harbor. By its use a person can readily find the time of high and low water at all harbor points.

JOHN H. LEVICK

Quick Action–
saves the day
Graflex Camera–
gets the picture

"A Close Call for the Fifty Footers" is what John H. Levick, the famous marine photographer, titles this photographic masterpiece—taken with a Graflex off Glen Cove during Larchmont Race Week.

...."A striking example where the Graflex qualities of speed and accuracy of focus are paramount—" writes Mr. Levick.

With a Graflex you're ready to do justice to the most interesting picture opportunities of a lifetime. No guess-work about focus. When it's in focus on the Graflex ground glass, it's in focus on the film. The simplest of all cameras for amateur or professional to operate.

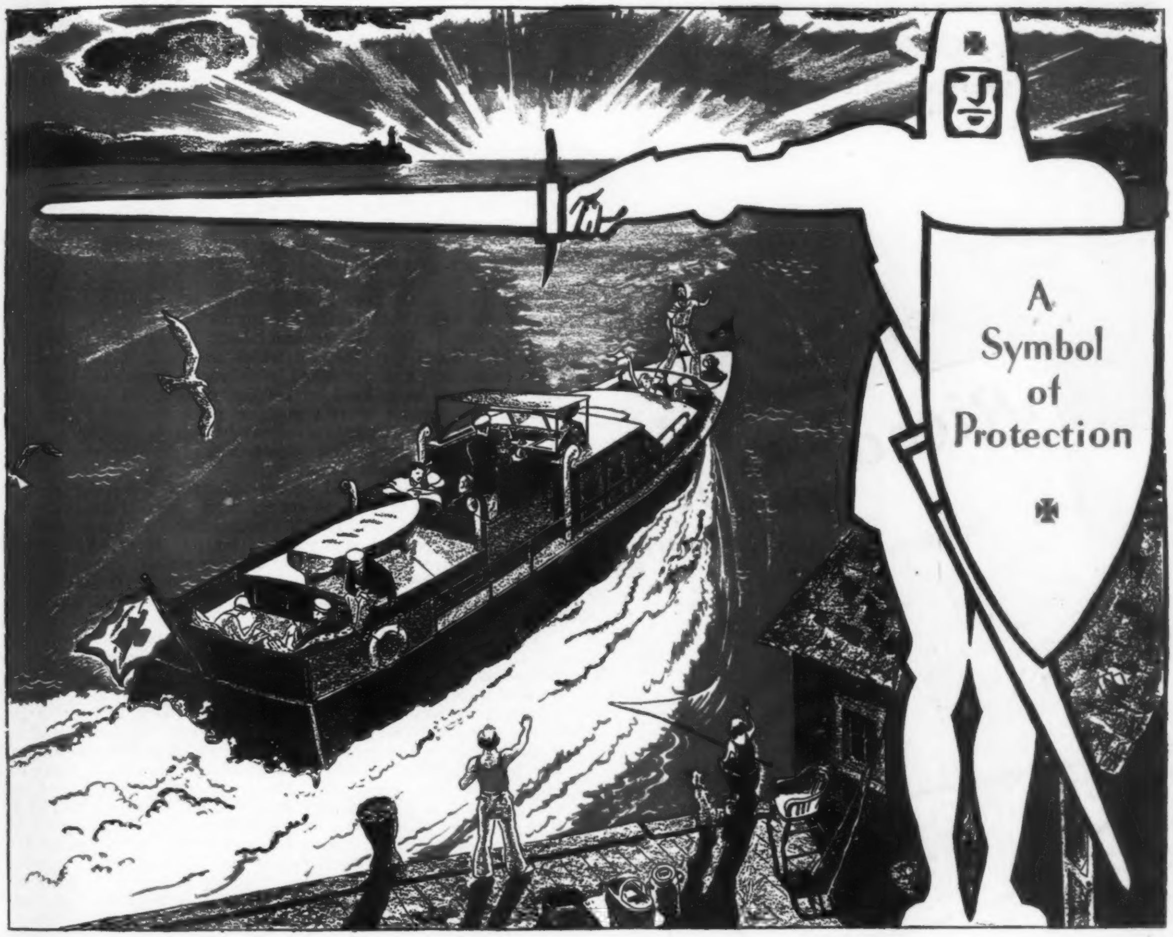
All summer's races, regattas and water sports—then September's great yacht-racing epic for The America's Cup ... this is THE summer to have the finest of cameras aboard!

The CAMERA For More *Interesting* Pictures

GRAFLEX

FOLMER GRAFLEX CORP. . . . ROCHESTER, N.Y.

FOLMER GRAFLEX CORPORATION, *Dept. 61*, ROCHESTER, N. Y.
I want to see the booklet that tells how more interesting pictures are being made. Please send "Why a Graflex?" to name and address written on margin of this page.



Cast off!... the modern cruiser is safe with ALFITE

Hours of lazy loafing. Of herculean struggle with deep sea fish. Hours when wind and sun and water lull high strung nerves to quiet contentment. Hours to which builders and designers have added their full share by making the boat safe and seaworthy.

Safe against everything but carelessness! And now, you can safeguard your boat against even that—by installing the ALFITE System of protection against fire.

The moment you cast off, your boat is an independent unit which must be self reliant. That's why so many yachtsmen have adopted ALFITE protection.

The ALFITE System kills fire by flooding the protected space with ALFITE Gas, in which fire can't live. ALFITE Gas is stored under pressure in small steel cylinders—connected by a fixed piped system to points where fire is most likely to break out. Located *outside* this fire zone is a control lever. A single pull releases the ALFITE Gas that kills the fire in a few seconds.

The ALFITE System is a product of American-La France and Foamite Corporation, the world's largest and oldest manufacturer of every recognized type of fire-fighting equipment.

Write for a copy of the booklet describing ALFITE protection for yachts and motorboats.

AMERICAN-LA FRANCE AND FOAMITE CORPORATION, DEPT. 820, ELMIRA, N. Y.

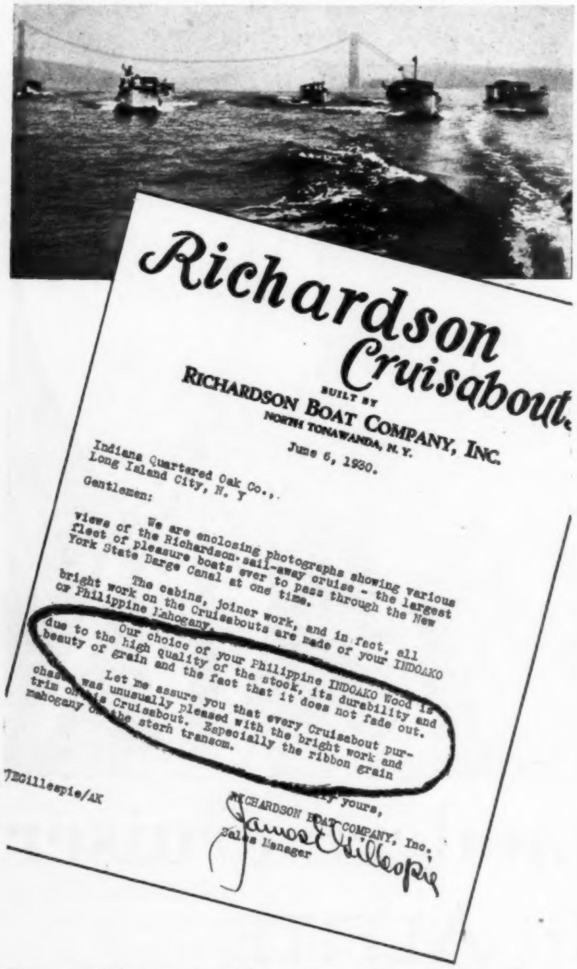
Offices in all principal cities

LA FRANCE AND FOAMITE PROTECTION

AN ENGINEERING SERVICE

AGAINST FIRE

". . . Every Cruisabout purchaser was unusually pleased with the bright work and trim . . ."



Richardson Cruisabout
BUILT BY
RICHARDSON BOAT COMPANY, INC.
NORTH TONAWANDA, N. Y.

June 6, 1930.

Indiana Quartered Oak Co.,
Long Island City, N. Y.

Gentlemen:

We are enclosing photographs showing various views of the Richardson sail-away cruise - the largest fleet of pleasure boats ever to pass through the New York State Barge Canal at one time.

The cabins, joiner work, and in fact, all bright work on the Cruisabouts are made of your INDOAKO or Philippine Mahogany.

Our choice of your Philippine INDOAKO Wood is due to the high quality of the stock, its durability and beauty of grain and the fact that it does not fade out.

Let me assure you that every Cruisabout purchaser was unusually pleased with the bright work and trim on this Cruisabout. Especially the ribbon grain mahogany on the stern transom.

ly yours,
RICHARDSON BOAT COMPANY, Inc.
James E. Gillespie
Sales Manager

JEGillespie/AK

The participants in this cruise, who were so "unusually pleased" with the exceptional qualities of Philippine INDOAKO Wood for trim, were:

	BOAT
JOHN C. HOWE	REBE H.
H. W. TRUILT	MARTHA
ALLAN B. CHALFANT	FINISTERRE II
DR. MARLO P. BATES	NANCY LEE
W. T. SANDALL	NORTH WIND II
ERIC VON SIEFART	CAREFREE
W. F. CUNNINGHAM	HERMIT II
L. E. WILSON	MABY DICK
J. W. PISON	YO-HO
ROBERT K. SMITH	LADY LUCK

THE happy combination of beauty, strength, ease of working and finishing, durability, light weight, and freedom from staining around the fastenings, in Philippine INDOAKO Wood is unsurpassed. In addition INDOAKO compares in price very favorably with other domestic and imported hardwoods, while at the same time excelling most of them in desirable qualities.

INDOAKO is by all odds *best for boats* not only for trim, but also for planking. Be sure your next boat is built with INDOAKO.

INDIANA QUARTERED OAK COMPANY
222 EAST AVENUE, LONG ISLAND CITY, N. Y.

FROM TONAWANDA TO NEW YORK

(*Continued from page* 49)

sible from the canal end of the dock and tie them up two and three abreast. We had hardly gotten them out of the way when a Troy Socony had edged in and tied up for the night.

The sun woke us up Wednesday morning. It looked as if we would finally have a fine day. All the Cruisabouts were under way at 8 o'clock and were bolling alongwide open on the Mohawk River. The scenery was wonderful! Soon after we started all the curtains were rolled up and we were going along in real summer style. We made the seven miles from Canajoharie to lock 13 in forty minutes and arrived there in time for breakfast. At lock 12 we were received by an old dog and her puppy, the official reception committee, who stalked aboard in search of food. They raided Hermit II and took half a can of chicken which they buried for future use.

We reached New Amsterdam about 11 o'clock, passed the home of Colonel Guy Johnson which was built in 1766 and has been remodeled and furnished with early American furniture. Much as we'd have liked to see the exhibit, we stuck to our Cruisabouts because there's nothing more delightful than the canopy top of a Richardson when the sun is shining and the water sparkling blue! Our objective for the day was Albany so we kept going right along.

Newspaper reporters and photographers of the *Knickerbocker* and *News* met us at Troy to get the high lights of the cruise for the Albany morning papers. We stopped at the Sunoco dock at Watervliet to get gas, and we paid for it! More, in fact than we did anywhere else. I suppose because we were one-time customers, or maybe business hadn't been so good. It was a short run from there to the Albany Yacht Club where we arrived at 7 P.M., ending one of the most delightful days so far.

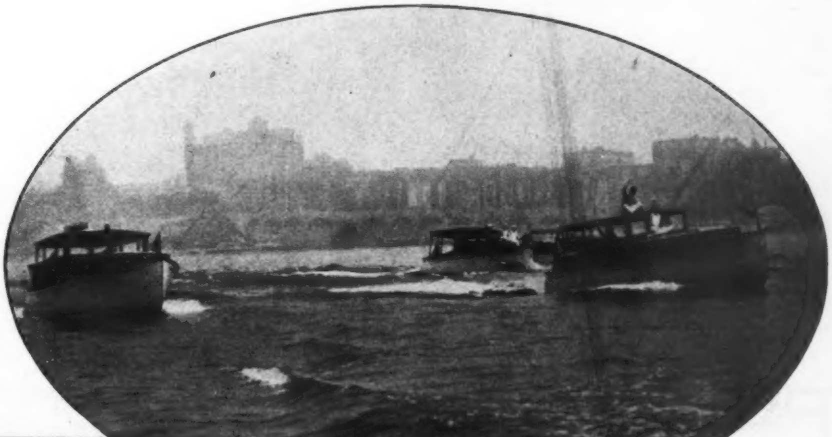
Thursday morning we planned a late start because the Governor's representative was to meet us. Promptly at 10 o'clock Commissioner Hayes, who is in direct charge of the New York State Barge Canal, met us in behalf of Governor Roosevelt and informed us how pleased he was that we were making use of this modern waterway, and hoped that others would learn about it and that it would become generally used for pleasure boating. We left the Albany Yacht Club at 10:50 and started down the Hudson for New York. The Hudson is well buoyed and if you are equipped with the proper charts it is not at all difficult to find your way along. We passed Kingston on the west bank of the river at 4 o'clock. Kingston has a very good harbor and would be a very suitable place for the yachts to stop overnight. Everything was going along fine until we came up to some floats holding fish nets. These nets weren't more than ten feet apart and seemed to stretch the whole width of the river. Hermit II slowed down and we gave the slow down signal to the rest of the fleet. When we got up to the nets we disengaged the clutch and drifted across. In this way we were sure not to pick up one of the float lines with our propeller. This net stretched across the river was a new one on the Cruisabouters and they went hay wire. They ran every which way, circled around, everyone following everyone else looking for the opening in the nets which they thought we had passed through. They buzzed around like a lot of blue bottle flies, circled around a tug and tow, and when the tug proceeded across the nets, the Cruisabouts went over without stopping their wheel or taking precautions of any kind. When we came to a second net about a mile further down the river the end was quickly found and everybody passed it on his starboard side.

We passed Poughkeepsie at 5 o'clock where we had planned to stop for the night, but because we were ahead of schedule and it was still light, we decided to keep running for another hour or more. We arrived at Newburgh about 6:45 and tired to find a suitable place to stop.

Friday morning we were up bright and early, anxious to start the last lap of our cruise; at the same time sorry it was nearly over. The sun was shining, but the visibity was unusually poor. We set our compass course and proceeded. We arrived at Tarrytown at 10:55. Sabihall, a brand new 75-footer overtook us and saluted at this point. The Washington bridge, marking the finish of our trip came into sight and we began to wonder where our friends Joe Lobenthal, Rosenfeld and all the others who had promised to meet us were. Suddenly a spray appeared on the horizon and Rosie began to shoot pictures of us, one shot after another! There they were—Joe Lobenthal, Walter Bailey, Herbert Stone, Rufe Burnham, and all the others! We knew they wouldn't fail us!

We passed under the new Washington Bridge and over to the moorings of the Colonial Yacht Club where Mr. Gillespie presented each of the Cruisabout owners with a handsome ship's clock and thanked them for their cooperation. The cruise was officially at an end at 12:30, right on schedule time. We all had a glorious time, and though the weather was damp, our ardor wasn't.

Pleasure Craft of Every Size *depend on* Exide Marine Batteries



IN RECENT RICHARDSON CRUIS-ABOUT SAILAWAY *eleven trim little craft, all equipped with Exide Batteries, made their maiden trip from North Tonawanda, N. Y., to New York City. Exide Batteries are standard equipment.*

HUGE, ocean-going yachts . . . graceful cruisers . . . swift speedboats. For every pleasure craft there's an Exide Battery built to dependably meet all electrical requirements.

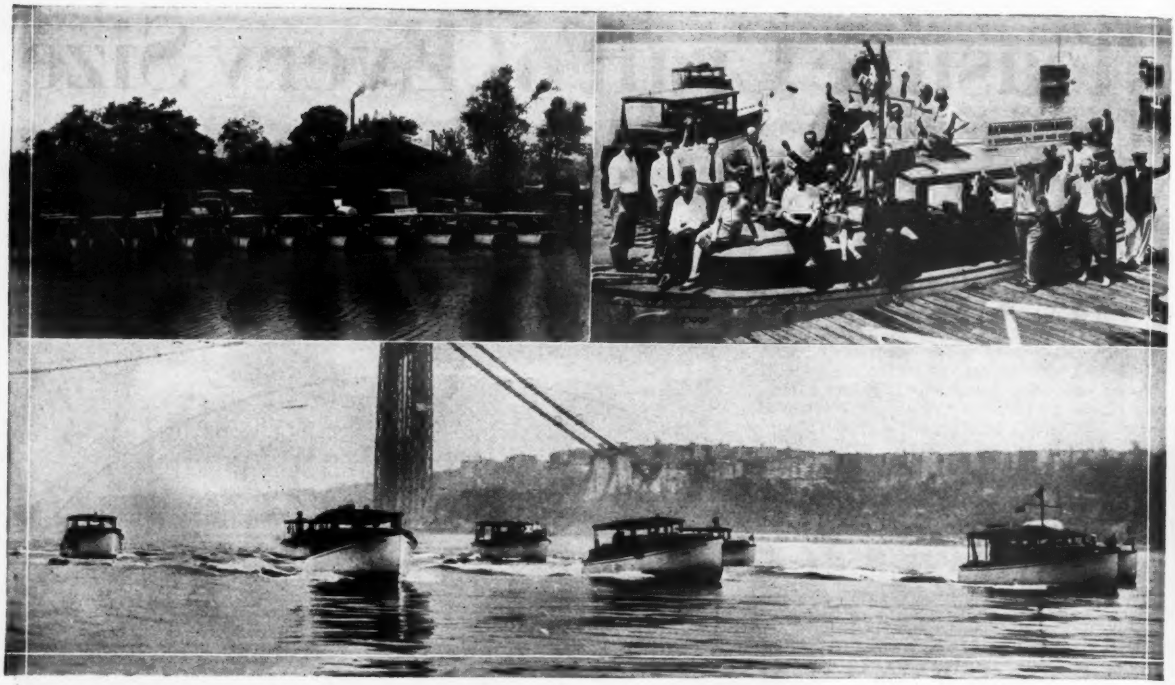
Architects, designers, builders know the quality and worth of Exides. That's why the majority of all yachts over 100 feet in length, built in this country in 1929, were equipped with dependable Exides.

So reliable, long-lived and economical have these batteries proved themselves that many shipbuilders and stock boat manufacturers have standardized on Exides.

There is an Exide representative in almost every important coast and inland port, who can give you valuable information on Marine Batteries.

Exide
MARINE
BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY, Philadelphia
THE WORLD'S LARGEST MANUFACTURERS OF STORAGE BATTERIES FOR EVERY PURPOSE
Exide Batteries of Canada, Limited, Toronto



ELEVEN Cruisabouts — forty people — 452 miles to New York City. Enthusiasm ran high — praises of the Cruisabouts were loud at the start of the Richardson Sail-Away Cruise and louder still five days later at New York City when the Cruisabouters ended this state-wide trip.

Why? Because every Cruisabout performed perfectly. Every Cruisabout exceeded the expectations of every participant in this cruise. Even turbulent, storm-tossed Oneida Lake lashed by a 40 mile gale that kicked up canopy-high seas keeping commercial crafts moored to the dock could not spoil the perfect performance of the Cruisabouts and it was crossed at full speed and in safety and comfort.

Do you wonder that the Cruisabouters are enthusiastic after this perfect performance?

Read the comments of the owners participating in this cruise! Ask any Cruisabouter for his opinion and he'll tell you that unmindful of wind or weather he sails his Cruisabout when and where he chooses.

Regardless of the price you pay you cannot purchase a cruiser of equal length, beam or displacement that has more comfort, greater seaworthiness and safety or gives value equal to that found in a Cruisabout.

Inspect the Cruisabouts at your nearest dealer or write today for booklet "E" completely illustrating and describing this finest of medium size, low priced yachts.

RICHARDSON BOAT COMPANY, Inc.
355 Sweeney Street North Tonawanda, N. Y.

CRUISABOUTS ARE DISPLAYED BY

Bruns-Kimball & Co., 5th Ave. & 15th St., New York City
Bruns-Kimball & Co., 102 So. Fourth St., Philadelphia, Pa.
Walter H. Moreton Corp., 1043 Commonwealth Ave., Boston, Mass.
F. D. Homan, 78 Riverside Ave., Amityville, L. I., N. Y.
Peden Co., Houston, Texas
N. J. Shea, 1424 Lauderdale Ave., Lakewood, Ohio
A. M. Deering, 1454 Builders Bldg., Chicago, Ill.
Volney E. Lacey, Charlotte Station, Rochester, N. Y.
George Bender, Erie Yacht Club, Erie, Pa.
Hill-Madden Boat Corp., Genesee Motor Ramp, Buffalo, N. Y.
T. B. F. Benson, 371 Bay St., Toronto, Ont., Can.
J. A. Scarlett, 436 E. Second St., Cincinnati, Ohio
Flood Gate Motor Boat Agency, 14th & Water Sts. S.W., Washington, D. C.
C. O. Horstman, 813 So. Washington St., Peoria, Ill.
Allmand, French & Thompson, Inc., 6460 E. Jefferson Ave., Detroit, Mich.
J. Walter Land, 416 Union St., Norfolk, Virginia
Thomas L. Barrett, 112 So. Second St., Louisville, Ky.
Boardman & Flower, 1740 Van Ness Ave., San Francisco, Calif.
Mississippi Valley Yacht Sales Co., Times Bldg., Alton, Ill.
Charles L. Killam, New Haven, Conn.
Weston M. Jenks, 8 Ford St., Hartford, Conn.
Edward Fell Jardine, 410 Carson Ave., Atlantic City, N. J.
Hubert Johnson, Bay Head, N. J.

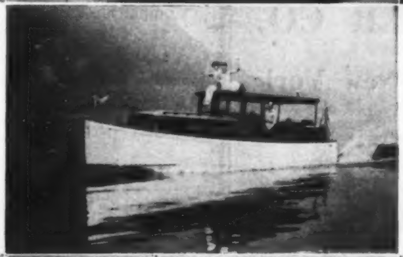
Richardson Cruisabouts

Enthusiastic? You Bet!

Every Owner Loudly Praises His Cruisabout!

"Hermit II" (Above) "If the general public could possibly know what a great boat the Richardson Cruisabout is I am sure in a short time you would find yourself unable to cope with the demands upon you." W. F. Cunningham.

"Finisterre II" (Opposite) "This is my second Cruisabout. We put the "Finisterre I" through all kinds of bad weather and I am sure that this Cruisabout will stand anything we care to go out in. She has more comfort and roominess in her 29 feet than I ever thought possible." A. B. Chalfant.



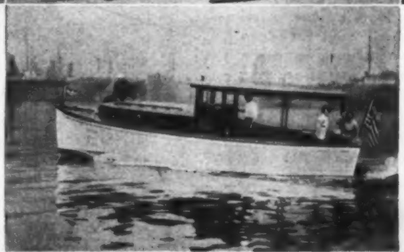
"Lady Luck" (Top center) "For her size there is no comparison with other boats. Her roominess and sturdiness make ownership a joy." R. K. Smith.

"Northwind II" (Above) "The little ship behaved splendidly on the broad Atlantic and I am more than pleased with her in every way." W. T. Sandall.

"Rebe II" (Above) "After making the trip we did through all kinds of weather I can assure you that I have absolute confidence in my Cruisabout." Judge John C. Howe.

"Yamrah II" (Center) "It is mighty well planned, staunchly built, powerfully motored. In fact it's a very fine boat and I am proud to be the owner of a Richardson Cruisabout." H. N. Wilson.

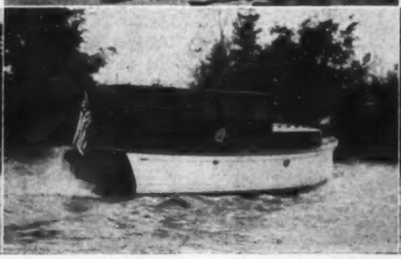
"Nancy Lee" (Below) "I am mighty well pleased with my Richardson Cruisabout. It's a great boat backed by a mighty fine organization." Dr. Marlo P. Bates.

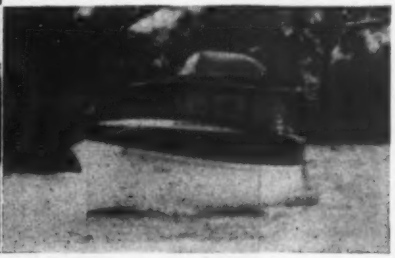


"Carefree" (Above) "The trip across Oneida Lake was a revelation and proved the ability of the Cruisabouts to take a pounding. I cannot speak too highly of the way both boat and motor performed." Eric Von Siefart.

"Helga" (Opposite) "Such comfort and convenience in 29 feet is amazing. She reminds me of home but doesn't make me long to be there." B. N. Pisow.

"Martha" (Below) "I never dreamed that any boat could be so compact, sturdy and seaworthy as my Cruisabout. I'm planning to use it for my summer home for the next ten or fifteen years." W. W. Truitt.





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SCREWS, BOLTS, NUTS, RODS AND SHAFTING

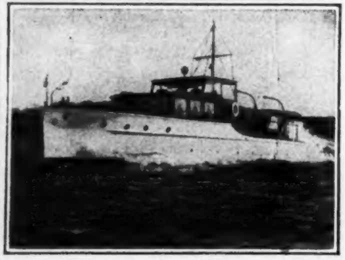
TOBIN BRONZE SHAFTING

Copper, Brass and Bronze Sheets . . Rods . . Tubes

T. E. CONKLIN BRASS & COPPER CO.
INC.
54-60 Lafayette Street, New York

Telephone Walker 7500

MEMBER COPPER & BRASS RESEARCH ASSOCIATION



SAFEGUARD the performance and efficiency of your modern high speed motor—insure the freedom of your cabins from smoke and the offensive odor of an overheated engine—with an easily installed and economical Groco Oil Cooler.

GROSS MECHANICAL LABORATORIES
BALTIMORE, MARYLAND

GROCO

OIL COOLER

Groco Oil Coolers are standard equipment on many of the finest boats and engines.

OIL INLET
VENT
WATER IN OR OUT
WATER IN OR OUT
WATER DRAIN
OIL OUTLET

YARD AND SHOP

(*Continued from page* 68)

WILLIAM E. GIBB

A sorrowful note was given to an otherwise happy holiday celebration during the course of the outboard races at Lake Quinsigamond, Worcester, Mass., when William E. Gibbs became the victim of a sudden attack of acute indigestion. He was rushed to the Worcester Hospital but a heart complication set in which ended his life shortly after his arrival. Billy Gibb was well-known and well-liked throughout the marine trade, his latest capacity being that of sales manager of the Penn Yan Boat Company.

He was born in Boston where he received his education. His first work was with the American Marine Equipment Company of that city and from that time on his primary interest was along the line of boats and boating.

During the period of the war he served throughout its duration and for two years in addition succeeding the Armistice. He was among the first in the service in organizing a tank corps at Gettysburg.

Following his service here, in 1920, Mr. Gibb joined the Frisbie Motor Company of Middletown, Conn., where he served in the capacity of vice-president. Two years later he went to the Sea Sled Company of Mystic with whom he was connected for a period of three years. Following that he went to the Van Blerck Motor Company of Pottstown, Pennsylvania, where he stayed until 1928. His next connection with with the Laconia Car Company of Laconia, New Hampshire, which position he left in January, 1930, to become sales manager of the Penn Yan Company.

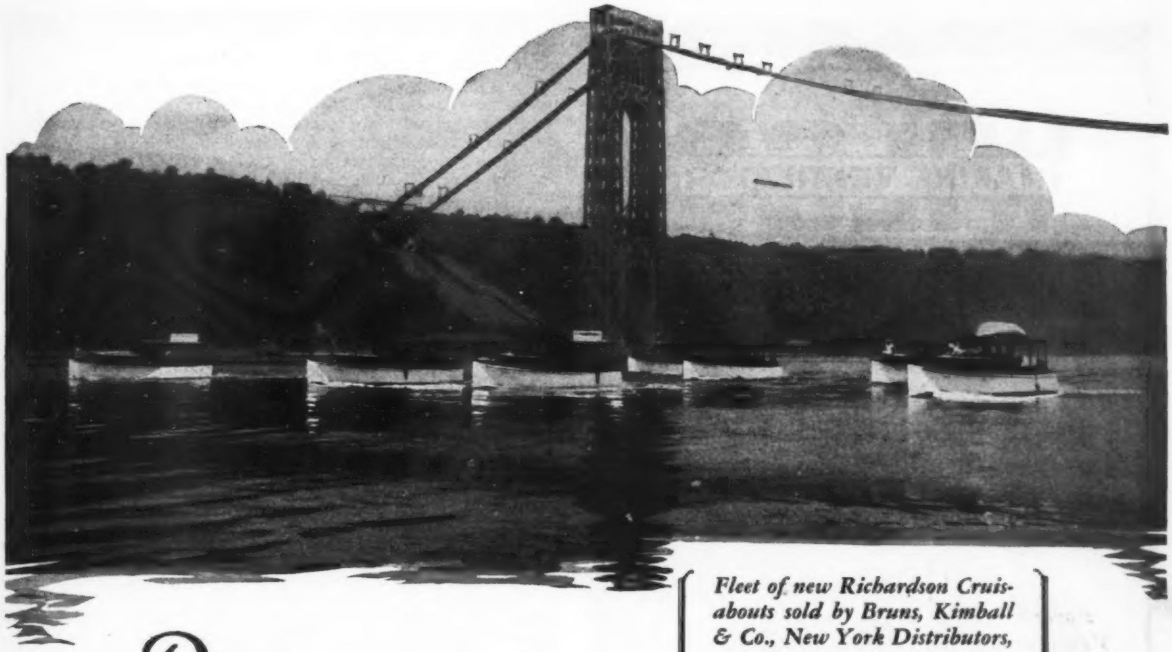
Mr. Gibb is survived by his wife, the former Miss La Verne Varson of Middletown, and a son, Walter Gilbert. He also leaves a sister, Mrs. E. Norton Suduth, and his mother.

William E. Gibb

A RECORD MONTH

Widespread talk of national business depression did not prevent the Matthews Company at Port Clinton, Ohio, manufacturers of standardized cruisers, from chalking up a remarkable record of deliveries for the month of May. During that period of thirty-one days, the Matthews Company delivered exactly thirty-two new cruisers into the hands of their owners, which is indeed a noteworthy record. About the twentieth of the month they realized that they were making deliveries at a rate that would bring them within reach of an excellent record for monthly sales and at that time had some hopes of being able to come somewheres near a mark of a boat a day for the month, yet they did not really hope to actually reach that figure. However, thirty-two deliveries were actually made and their record is now a matter of history.

(*Continued on page* 98)



Fleet of new Richardson Cruisabouts sold by Bruns, Kimball & Co., New York Distributors, completing owners' cruise to New York City from the plant at North Tonawanda, N. Y.

Richardson

Safeguards a 27-year Reputation by Standardizing on TOBIN BRONZE

The builders of the popular Richardson Cruisabouts standardize on TOBIN BRONZE for shafting, thus safeguarding a reputation for dependability built up during the past quarter century.

For nearly twice that many years TOBIN BRONZE has served the motor boat industry—maintaining an enviable reputation for reliable service—filling the need for dependable propeller shafting.

Made solely by The American Brass Company, TOBIN BRONZE (Reg. U. S. Pat. Off.) is furnished in trademarked sheets, rods, tubing, and turned and specially straightened shafting.

THE AMERICAN BRASS COMPANY
General Offices: Waterbury, Conn.

ANACONDA COPPER
BRASS ANACONDA BRONZE

WILCO

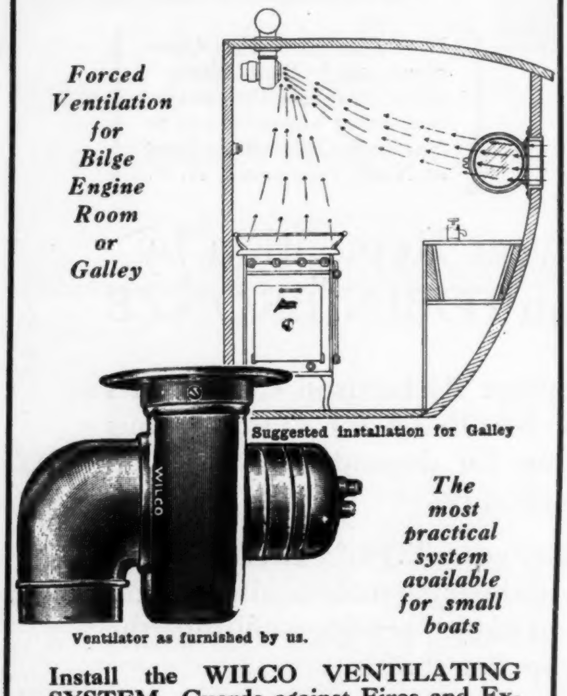
MARINE VENTILATOR

is standard equipment on

DAWN
LUDERS
MATTHEWS
ROBINSON "Sea Gull"
WHEELER "Playmate"

and many others

Forced Ventilation for Bilge Engine Room or Galley



Suggested installation for Galley

Ventilator as furnished by us.

The most practical system available for small boats

Install the WILCO VENTILATING SYSTEM. Guards against Fires and Explosions, keeps the galley cool and sweet. The only practical low voltage marine blower. Consumes little current and can be mounted through deck or cabin top.

May we send you a catalog?

The E. J. Willis Co.

Manufacturers and Distributors of
YACHT EQUIPMENT AND MARINE HARDWARE
85 CHAMBERS ST. *(through the block to)* 67 READE ST.
NEW YORK CITY

Established 1888

FOR CORRECT TEMPERATURES

(*Continued from page* 86)

various starting, warming-up, and running readings of his heat indicator. The main thing is to watch it, especially on a long, hard trip and at high speeds. Carbon deposits, crankshaft or rod bearings too tight or too loose, stoppage of oil or water circulation, poor ignition, a rich carbureter, poor or uneven compression, excess friction anywhere in shaft, bearings, or propeller are common causes of overheating, but the modern engine thermometer gives visible warning of any such trouble in advance of serious damage.

Watching the oil level and pressure gauge is an old story, but if one wants to add another chapter to it, he can install an oil temperature thermometer on the crankcase bottom, mounting its dial on the instrument board alongside of the water thermometer. This might be called "playing both ends against the middle" for safe cooling.

D. M. C., Cleveland, O.

EFFICIENCY IN HAULING BOATS

(*Continued from page* 63)

of its length. The frame of this car is made to just clear the cross bearing pieces on the hauling car and the rails placed accordingly.

Steel cars are recommended where the club finances will allow. It is possible but hardly practical for the members to construct a good steel car for enough less than one can be purchased to make it worth while. The Turl Iron and Car Co., of Newburgh, N. Y., have had a wide experience in the construction of steel cars for industrial purposes and will be glad to supply sketches and estimates upon receipt of your requirements. Give them the gauge, height of car and maximum load to be carried. This firm will supply parts for wood or steel frame cars or the complete car. They also supply rails and a patented steel tie for portable track. By using the portable track the rails could be moved as each space is filled.

Provision must be made for fastening the two bars securely together. Steel cars will not drift apart, but the skidding car may roll if not chocked. An iron stop shaped like the letter U but with square corners fastened to the cross rails on the hauling car with a bolt will serve this purpose well. So proportion the strap that when it is on top of the rails it has a clearing fit against the wheel. After both wheels are chocked wedge them with wood wedges. One for each wheel will be required. When moving the skidding car, knock out the wood wedges and turn the stops down below the rails on one side. Wood frame cars should have a rod hooked under the rails and drawn up with a free running nut. The rods on a steel car would be a safety feature.

For moving the skidding car use track bars or pinch bars under the wheels working both ends at the same time. Should difficulty be experienced in jumping the wheels over the gap between the rails at the car lay a flat piece of steel forged thin at each end over the gap for the wheels to run on. This wedge must not be high enough to raise the wheel flange above the rails. The usual method of chocking boats to prevent their falling over can be used on any type of car.

W. B. M., Newburgh, N. Y.

SIMPLE BOAT YARD GEAR

THE average yacht club registers upon its books a variety of craft ranging from the small outboard to boats of substantial beam. The time and the labor necessary to haul these boats out and to store them is in direct ratio to their tonnage.

All purposes of winter storage are best served by having two runways, one for the smaller boats and the other for the larger ones. This situation would mean that the smaller boats would not need to have cradles to conform to the size of the larger runway. This would effect a saving in storage space allotted to the small boats in winter as well as in the storing of their cradles during the summer.

The use of two runways would be a time saver, particularly in tidal waters where the larger boats are often floated over their cradles and allowed to settle down on them as the tide recedes. With the smaller boats this procedure is not necessary and several small boats could thus be hauled out in the time it would consume to take one large boat out of the water.

Ordinarily boats are hauled out about the same time. The first chilling blast of late fall starts the exodus. The period of hauling out cannot be spread out over many week ends—the popular time for hauling out. Hence, the hauling out facilities must conform to the number of boats in the club.

Two runways placed at opposite sides of the yard will take care of the wants of the average club. This arrangement will

(*Continued on page* 98)

The Cruise of the Cruisabouts

SANDS "WINNER" CLOSET

Price $39.75
(With Oak or Mahogany Finish Seat and Cover, Pump Natural Bronze Finish)
With Cellu-white Seat, Cover and White Pump as illustrated
$45.75

AGAIN is the great popularity of Sands "Winner" Closets acknowledged . . . . the Cruise of the Cruisabouts has focused the eyes of the yachting fraternity upon Richardson boats . . . much depended upon the successful performance of the fleet and its equipment . . . the fact that the Richardson Company selected Sands Fixtures for this important event proves their worth.

Every one of the eleven boats in the Richardson fleet is equipped with the "Winner," the most popular of all Sands Closets.

Impressive, indeed, is the demand for this handsome fixture . . . on pleasure boats throughout the entire world no other closet is so widely used as the Sands "Winner."

Quantity production gives you this fine closet in improved form at a greatly reduced price.

Order from your nearest distributor:

SANDS
PLUMBING
FIXTURES

"The BEST that can be PURCHASED"
RICHARDSON BOAT CO.
James E. Gillespie
SALES MANAGER

New York City: The Durkee Company
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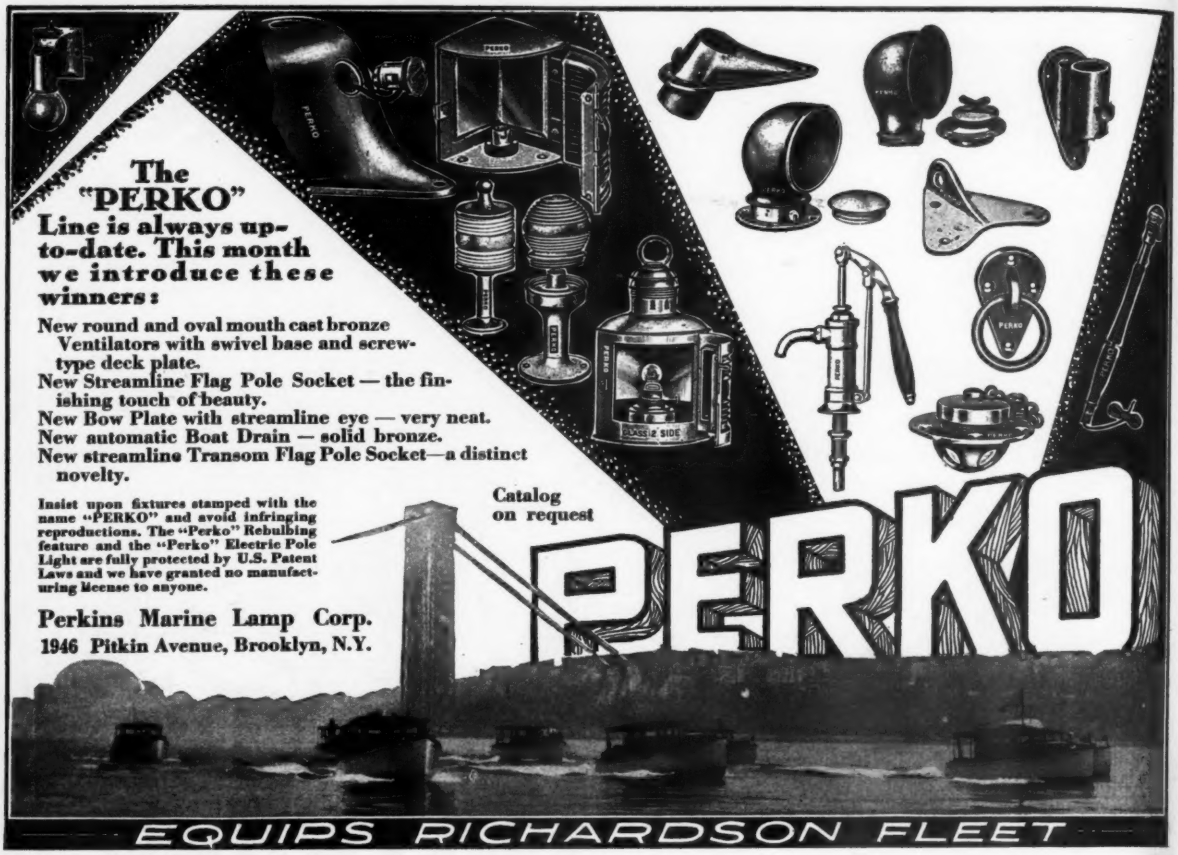
Detroit, Mich.: Henry H. Smith Co.
Houston, Texas: Peden Company
Miami, Fla.: Hopkins-Carter Hardware Co.
New Orleans, La.: Woodward, Wight & Co.
San Francisco, Cal.: Johnson & Joseph Company
San Pedro, Cal.: The C. J. Hendry Co.
San Pedro, Cal.: Marine Hardware Company
Seattle, Wash.: Pacific Marine Supply Co.
Portland, Oregon: Oregon Marine Supply Co.
Toronto, Ont.: John Leckie, Limited

A. B. SANDS & SON CO.
20-24 VESEY STREET
NEW YORK CITY



The "PERKO" Line is always up-to-date. This month we introduce these winners:

New round and oval mouth cast bronze Ventilators with swivel base and screw-type deck plate.
New Streamline Flag Pole Socket — the finishing touch of beauty.
New Bow Plate with streamline eye — very neat.
New automatic Boat Drain — solid bronze.
New streamline Transom Flag Pole Socket—a distinct novelty.

Insist upon fixtures stamped with the name "PERKO" and avoid infringing reproductions. The "Perko" Rebulbing feature and the "Perko" Electric Pole Light are fully protected by U.S. Patent Laws and we have granted no manufacturing license to anyone.

Catalog on request

Perkins Marine Lamp Corp.
1946 Pitkin Avenue, Brooklyn, N.Y.

PERKO

EQUIPS RICHARDSON FLEET

YARD AND SHOP

(*Continued from page* 94)

OUTBOARD RECORDS RAISED

Five new official outboard records have recently been set, three of them being made at the first eastern Intercollegiate Regatta held at Skaneateles, N. Y., and the other two at a regatta conducted by the Northwest Outboard Association on Lake Whatcum, Bellingham, Washington. At Skaneateles the Class D mark for Division 1 drivers was raised to 41.783 by S. Nunnelly in a Brobeil boat powered with a Johnson motor. In Class F, Division 1, Nunnelly established a record of 36.73 miles an hour, using on both occasions Mobile oil for lubrication. A Class F, Division 2 mark was set at 41.37 miles per hour by W. Crawford's Johnson-powered Penn Yan boat. Crawford used Pennzoil for lubricating his motor. Mobile oil was also used by Feldhusen, who won the recent Staten Island race for outboards.

The records set at Bellingham were for Class B, Division 1, 5 miles; and Class C, Division 2, 5 miles. In the former M. B. Troyer of Seattle, Washington, brought the Class B mark up to 35.112 miles per hour, driving Miss Epps II. The Class C record was established by Roy Craig's Windy with a speed of 39.840 miles per hour. Both boats were powered with Johnson engines.

OVERCOMES HANDICAP TO WIN

One reason that so many boys, and even women have made such excellent records as outboard racers is their comparative lightness. After all, even the largest outboard motor is a small thing compared to most power, and to ask it to drive a load of four or five hundred pounds at a high rate of speed is giving it a pretty large contract. Thus the 1929 victories of William Miller of Auburn, R. I., which were recently called to the attention of this publication, are all the more remarkable, since Mr. Miller himself weighs 188 pounds, and his total racing load is more than three hundred, with motor and hull included.

In his seventeen major victories of last season, Miller used a standard hull which he has altered to suit his own ideas, and powered it with a Caille Class B motor. In most of the races he entered, his outfit was the least expensive of any of the contestants, but this did not keep him from coming in a winner in the face of very strenuous competition. This included sixteen firsts in Classes B and C, for which cups were given, and a gold medal for the 1929 championship in Class B, Division II.

PROPER LUBRICATION

"This wonderful cruise across the Empire State is nothing short of a remarkable tribute to the three major factors involved—the Richardson Cruisabout, the Gray engines with which they are powered, and Duplex marine engine oil with which they were lubricated," said Morris Rosenfeld, prominent marine photographer of New York, whose judgment on boating matters in general is accepted as being the word of authority, at the Colonial Yacht Club, at the conclusion of the cruise on May 23.

Rosenfeld has probably attended more regattas than any other man active in the trade—he has covered all motor boat races of prominence for the past decade. He is a motor boatman himself, and an enthusiastic one, and his judgment is not to be taken lightly.

Rosenfeld was referring, of course, to the cruise of eleven Richardson Cruisabouts from the plant of the Richardson Boat Company, Tonawanda (Buffalo) to New York City. This was one of the largest cruises of its kind in history, and the parade of these eleven cruisers from Lake Erie, through the New York State Barge Canal to Albany and then down the Hudson to New York, sets a high water mark.

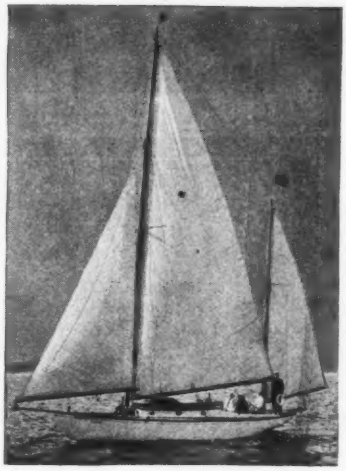
All boats taking part in this cruise were handled by their owners, who had little or no experience in handling boats and marine engines. Despite this there were no accidents, no collisions, no damage, no case of engine trouble, in fact, nothing whatsoever to mar the trip except that one of the new boat owners, when first negotiating the locks, leaned over the side of his boat too far and took an involuntary bath.

All eleven boats were lubricated with Duplex marine engine oil, grade S, and after the conclusion of the run, G. R. Richardson, president of the Richardson Boat Company, Tonawanda, made this statement—"During the whole trip we had absolutely no trouble of any kind, and we attribute the fact that the motors kept running smoothly at top speed throughout the trip to the use of Duplex marine engine oil.

"When the Cruisabouts changed their oil at Albany, after the 350-mile run across New York State, the oil coming out of the crankcase was practically as good and clean as when new. I would also like to have you know that Kasson Waterproof Grease was used in all stuffing boxes and it proved just as satisfactory as always."

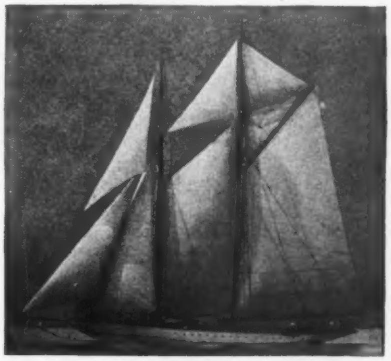
(*Continued on page* 106)

LUX protected schooner, "Goodwill," Keith Spalding, owner.



The "Markay," LUX protected. One of many Alden designed auxiliaries.

W. B. Bell's "Elena," winner of the King of Spain's trophy, carried LUX protection.



FIRE LIKES AUXILIARIES, TOO . . .

FAMOUS AUXILIARIES LUX PROTECTED

ALOHA
CRESSIDA
CUTTY SARK
MALABAR VIII
MARINER
MIGRANT
NORTHERN LIGHT
TRADE WIND
BLACK DOUGLAS
ALPHA
BLACK HAWK
BLACK EAGLE
PAGAN
LODE STAR
NOR' EASTER
COCKATOO
BALD EAGLE

FIRE has no favorites. Wherever gasoline or oil are used for fuel, fire finds its victims. Engines used infrequently, cramped in narrow bilges, provide particularly likely spots.

The price of neglecting the fire hazard on your boat, be it an auxiliary, cruiser or runabout, may be the lives of those on board as well as the complete destruction of the boat. The price of the LUX System—protection against the worst oil or gasoline blaze—begins as low as $55.00.

The principle of LUX operation is smothering the fire under a cloud of carbon dioxide gas, released from a cylinder by a remote control handle. The gas completely extinguishes the most raging blaze in less than 5 seconds—without any damaging after effects.

The LUX System is always effective because of its patented release valve which cuts away the disc sealing the gas in the cylinder. Carbon dioxide will freeze and clog if there is any restriction in its flow when discharging. But the LUX valve cuts the disc out completely so that the flow is free and positive.

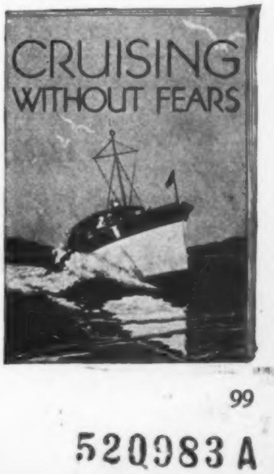
Walter Kidde & Company, Inc.
140 Cedar Street
New York

LUX

FIRE EXTINGUISHING SYSTEM

LABELED BY UNDERWRITERS' LABORATORIES

"Cruising without Fears" describes the LUX System as used on all types of boats. The booklet will be sent on request.



520983 A

UNIVERSAL

Cutting vibration and reducing wear

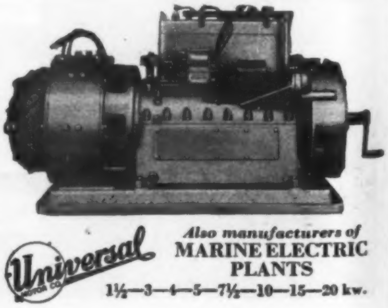
One of the Gisholt precision balancing machines. All Universal crankshafts and flywheels are balanced on special balancing equipment.

IN A MARINE motor most of the load on the crankshaft is taken at the reverse gear end. It is typical of Universal engineering to provide for this by designing the rear main bearing larger than any of the others—just the reverse of automotive practice. Consequently a Universal

---

There's a Universal to meet your needs

Three Blue Jackets	40-44-47 HP
The Single Cylinder .	6-8 HP
The Flexifour	10-15 HP
The Super Four	35-50 HP
The Sixes	77-88 HP
The Eight	115 HP



Universal

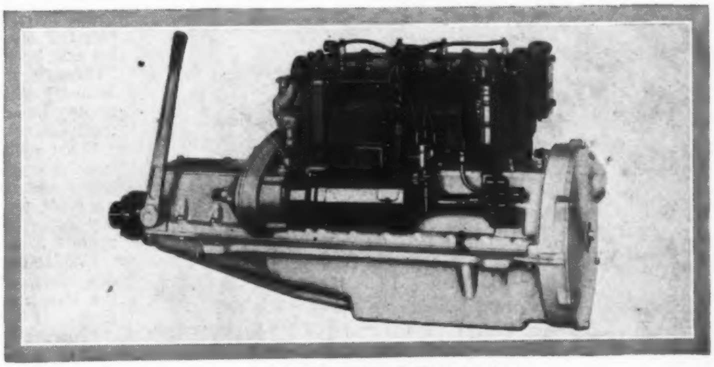
Also manufacturers of
MARINE ELECTRIC PLANTS
1½—3—4—5—7½—10—15—20 kw.

100% marine — 100% good

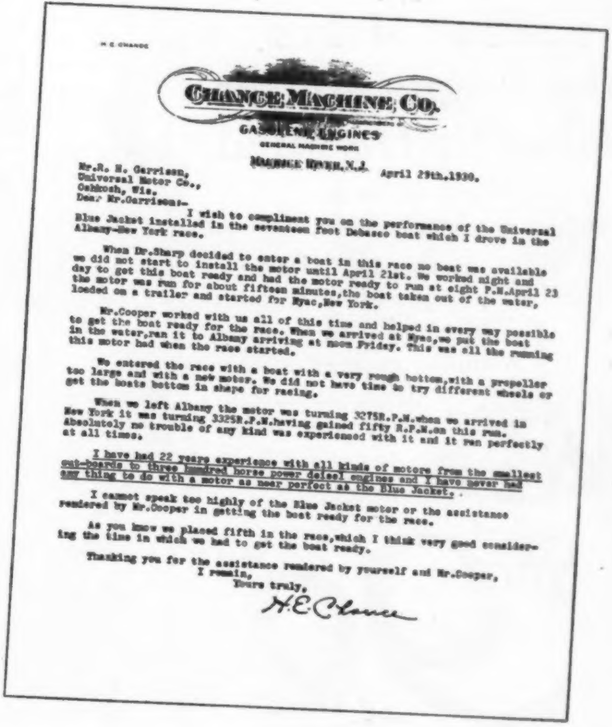
runs far longer before bearing wear begins to permit whip in the crankshaft, vibration, and rapid depreciation.

Provision was made in the design of the Universal Blue Jacket crankshaft for easily taking up end thrust—again reducing vibration and wear. The bearing-caps are doweled into the crankcase, so that there is no possibility of imperfect fit, rapid wear and vibration. And in addition, every Universal crankshaft and every Universal flywheel is dynamically balanced on the most modern balancing machines.

These are but a few of the special provisions which Universal makes for the arduous service that a marine motor gets. There are scores of others distinctive to Universal. Purchasers of the new series Universal 100% Marine Motors are learning a new kind of boating pleasure. It's ten to one that there's just the right Universal for your own boat.



The Universal Blue Jacket
40—44—47 H. P.



H. E. CHANCE

CHANCE MACHINE CO.
GASOLENE ENGINES
GENERAL MACHINE WORK
MAURICE RIVER, N.J.

April 29th.1930.

Mr.R. H. Garrison,
Universal Motor Co.,
Oshkosh, Wis.
Dear Mr.Garrison:-

I wish to compliment you on the performance of the Universal Blue Jacket installed in the seventeen foot Debasco boat which I drove in the Albany-New York race.

When Dr.Sharp decided to enter a boat in this race no boat was available we did not start to install the motor until April 21st. We worked night and day to get this boat ready and had the motor ready to run at eight P.M.April 23 the motor was run for about fifteen minutes,the boat taken out of the water, loaded on a trailer and started for Nyac,New York.

Mr.Cooper worked with us all of this time and helped in every way possible to get the boat ready for the race. When we arrived at Nyac,we put the boat in the water,ran it to Albany arriving at noon Friday. This was all the running this motor had when the race started.

We entered the race with a boat with a very rough bottom,with a propeller too large and with a new motor. We did not have time to try different wheels or get the boats bottom in shape for racing.

When we left Albany the motor was turning 3275R.P.M.when we arrived in New York it was turning 3325R.P.M.having gained fifty R.P.M.on this run. Absolutely no trouble of any kind was experienced with it and it ran perfectly at all times.

I have had 22 years experience with all kinds of motors from the smallest out-boards to three hundred horse power deisel engines and I have never had any thing to do with a motor as near perfect as the Blue Jacket.

I cannot speak too highly of the Blue Jacket motor or the assistance rendered by Mr.Cooper in getting the boat ready for the race.

As you know we placed fifth in the race,which I think very good considering the time in which we had to get the boat ready.

Thanking you for the assistance rendered by yourself and Mr.Cooper,
I remain,
Yours truly,
H.E.Chance

Universal
MOTOR CO.

UNIVERSAL MOTOR COMPANY
210 Harrison Street, Oshkosh, Wis.
New York Showroom: 44 Warren St.
London Showroom: 22 George St., Hanover Sq. W.

UNIVERSAL MOTOR CO.
210 Harrison St., Oshkosh, Wisconsin

Please send me your 1930 year book containing 40 pages of valuable data on the new Universal Motors and their use.

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Address ....
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CANCER
JULY

What Makes the Engine Buyer Make Up His Mind?

[*This is What Impresses Him Most*]

—"And you can be quite sure that if a motor is Paragon-Equipped the engine manufacturer is paying the same careful attention to the rest of his motor."

The "90" Line
PARAGON

Ball Bearing Equipped
100% Oil-Tight Enclosed Models

This same reverse gear that leading American engine manufacturers are building into their motors can be bought in our own enclosed, oil-tight, water-tight models. They come complete with necessary thrust bearings and couplings—all ready to be connected simply and easily—in 15 minutes.

PARAGON GEAR WORKS
606 Cushman Street, Taunton, Mass.

MAJOR SEGRAVE KILLED

(*Continued from page* 37)

official secrecy. Commodore George Harrison Phelps of the Detroit Yacht Club, who is abroad at the present time and was in England at the time of the accident making arrangements for the coming International race in Detroit, visited Major Segrave shortly before the launching of Miss England II. He found him full of eagerness over the race and most enthusiastic about his new boat. Concerning his boat and motors, Sir Henry said: "Through another wonderful development which only the Air Ministry knows, the motors will give a total power unobtained by any other engine in the world per 100 c.c. of capacity. The total power will be at least 4,000 h.p.

"Last year when I did 93 m.p.h. I knew that British designers could give me nothing better on the old ideas, and W. K. Guinness and myself began a game of toy boats. Evening after evening we made toy boats on the plan that the engines and gearbox in any motor boat must be held in a subframe, a sort of car chassis applied to motor boats.

"We tested these toy ships as best we could in baths and garden lakes, and their steadiness was so impressive that we put the idea before Fred Cooper, M.I.N.A., the famous yacht designer of Cowes. He also believed in it.

"Discussing it before the Schneider Trophy air race last September, a very high personage suggested that the use of Rolls Royce aero engines would be sanctioned for a boat that had a chance of getting back the British International trophy held by America since 1922.

"I placed the matter before Rolls Royce, and the Air Ministry consented to the secret engines being used.

"Instead of, as is usual, a hull being built and engined afterwards, we have built a hull around two engines. The sub-structure, or chassis, is of wood and metal, something like a cradle. Each joint has been tested scientifically to withstand hundreds of tons of twisting strain. When this was finished, then the outer shell was built round it . This consists of light alloy metal curved criss-cross, and over that a skin of Honduras mahogany.

"Finally the bottom of seven-ply mahogany is bolted direct on to the sub-frame or chassis. Before the final curves were settled hundreds of toy boats of various shapes were made and placed in an air stream with chalk floating in the air and impinging on prepared metal so that the effect could be photographed.

"Underneath the air chamber was a most delicate balance machine recording the hundredth part of a pound difference of resistance. Even a piece of paper pasted on the toy hull showed on the balance. These tests proved that a hull tapered like the pear-drop sweet of childhood, with the fat end of the drop as the stem, was the best.

"The whole secret of the boat is in this sub-frame and abnormal shaped hull. But there are more remarkable things about it. The boat, 38 feet in length, will weigh 4 1-4 tons with fuel and oil all in, but she weighs only 3.4 lb. per h.p. of the engines, a marvel when you know that the Schneider aeroplane weighed 3.6 lb. per horsepower.

"The engines will run at 12,500 revolutions a minute. Beyond that speed we cannot get a propeller to grip the water. Slip occurs just like the slipping clutch of a car. The engines will be fitted in the stern, port and starboard, between my back and the transom.

"The drive will go forward to a gear-box, and from there the single propeller will pass through the hydroplane step of the bottom to just in front of the rear rudder. It will be 18 inches below the boat bottom.

"There will be controls in duplicate to work with two feet. They are not connected, and if one engine goes wrong I shall be able to cut it out altogether and carry on. A compressed air starter is fitted between the engines and its starts them as easily as a girl can start an Austin Seven. You just press a tiny button on the dash and the thing is done.

"There are no fewer than 24 instruments on the dash. No man could drive the boat alone. Three will do it. Michael J. Wilson, a petty officer on the old Dover C. M. B., a Dorset motor garage proprietor, who will act as starboard mechanic, will watch 10 instruments. F. Cooper will watch 10 on the port side, and while I drive I shall have to watch four before me.

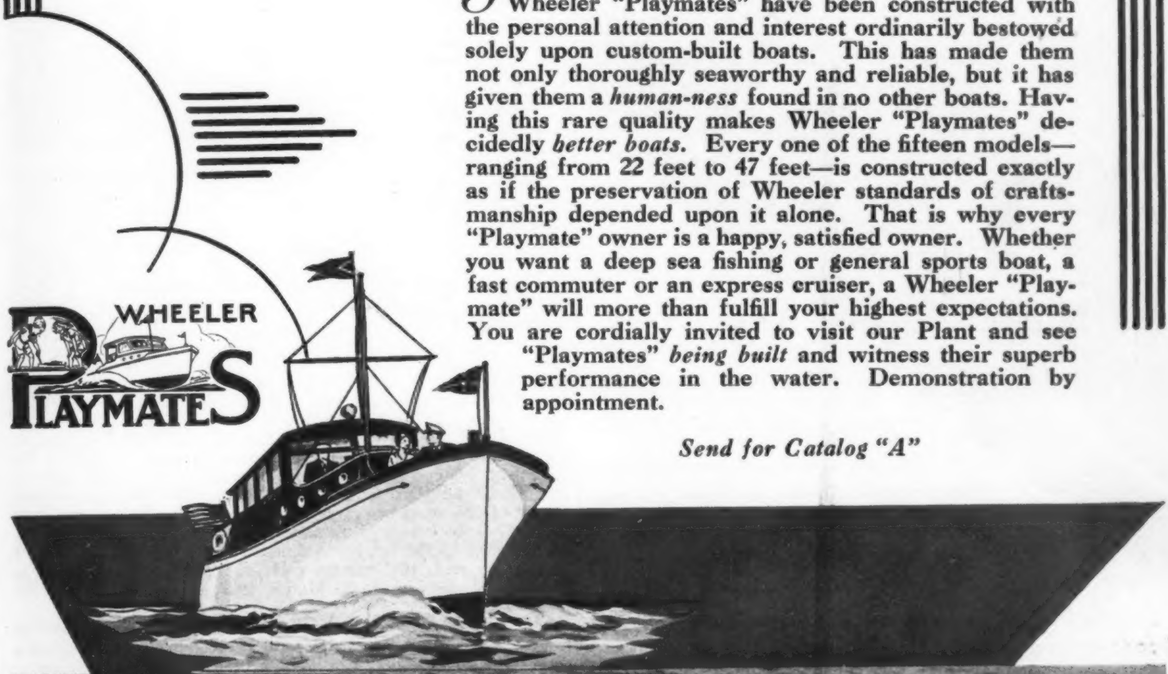
"I have yet to puzzle out how to operate two clutch handles on my right and left and steer at the same time. The boat will have two rudders, one aft and the other near the stem, and with these it will be impossible to turn a mark buoy in a curve less than half a mile.

"The lowest speed the boat can do is 17 m.p.h. with the engines working at 400 revolutions a minute.

"Her top speed is 115 miles an hour, and the huge engines are so remarkable that she can be driven nicely at any speed in between.

(*Continued on page* 104)

Wheeler Boats are Better Boats—and Better Built



THROUGH two generations of boat-builders, Wheeler "Playmates" have been constructed with the personal attention and interest ordinarily bestowed solely upon custom-built boats. This has made them not only thoroughly seaworthy and reliable, but it has given them a *human-ness* found in no other boats. Having this rare quality makes Wheeler "Playmates" decidedly *better boats*. Every one of the fifteen models—ranging from 22 feet to 47 feet—is constructed exactly as if the preservation of Wheeler standards of craftsmanship depended upon it alone. That is why every "Playmate" owner is a happy, satisfied owner. Whether you want a deep sea fishing or general sports boat, a fast commuter or an express cruiser, a Wheeler "Playmate" will more than fulfill your highest expectations. You are cordially invited to visit our Plant and see "Playmates" *being built* and witness their superb performance in the water. Demonstration by appointment.

Send for Catalog "A"

WHEELER SHIPYARD

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BROOKLYN, NEW YORK
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Boston—Stearns Marine Service Co., 40 Broad St.

Syracuse—C. E. Brown, James St. and Oswego Blvd.

Houston—Tracy Parks, 2nd Nat'l Bank Bldg.

Miami—Couzens & Daly, 29 Hotel McAllister Arcade

Chicago — Corwith Cramer, 228 North La Salle St.

Cleveland—Porter Marine Sales Co., Clifton Park Lagoon, Lakewood, Ohio

Detroit — Detroit Marine Garage, 7436 Jefferson Ave., East

Los Angeles—Alfred E. Mackenzie, 1800 Angelus Ave.

Why guess, when you can know your speed? : : : Heretofore your speed on the water has been mostly guesswork. Now you can see at a glance just how fast you're going. And once you've used one of these speedometers, you'll never be without one, any more than you'd drive a car without a speedometer : : : The speedometers tell you at a glance just how fast you're going through the water, and the logs show your trip mileage and total mileage as well : : : They are a great help in navigating by chart and compass—a life saver in a fog—and a constant check on your engine : : : These fully tested, dependable gauges are rendering valuable service on large and small boats of all types from cruisers to outboards : : : Passage through the water creates the pressure which is translated accurately into M.P.H. on the dial. There is no connection with motor power, nor towage of apparatus.

NATIONAL MARINE SPEEDOMETER
Outboard Model $18.50 each.
Models A, B, C & D for speeds up to 15, 25, 35, 60 M.P.H. $30.00 each.

NATIONAL LOG
Models H or J for 35 or 60 M.P.H. $150.00 each.

Ask your dealer and if he has none on hand, write us direct and give us his name.

THE NATIONAL LOCK WASHER COMPANY
40 Hermon Street
Newark, N. J.

MAJOR SEGRAVE KILLED

(Continued from page 102)

"In a racing start she will almost stand on her tail, but in a few seconds she should be planing and her wash at 100 miles per hour should be less than that of an outboard motor boat doing 30 m.p.h."

Miss England's first test on Lake Windermere on June 5th revealed to Sir Henry and Lord Wakefield, his sponsor, a faulty cooling system but that failing in no way dampened their confidence as to the boat's ultimate fitness as a contender. It was thought that the occurrence might well prove a fortunate one as it was immediately followed by an announcement that Rolls Royce had offered Sir Henry their fullest co-operation and had sent their engineers to his plant at Derby. The action of Rolls Royce in openly espousing the cause of Sir Henry in the Harmsworth race was greeted by the English with jubilation. Lord Howe, President of the Marine Motoring Association of Great Britain, stated: "In Miss England II, we have the boat and in Segrave we have the man. For nerve and calculated coolness in action, he is like the motors—mechanically perfect. Detroit is going to see a race this year, the like of which may never be repeated."

Sir Henry Segrave was born in the United States but his ancestry and breeding were British. He left college to enter the world war and immediately went into the trenches. Later he became an aviator and was shot down in combat over the lines. He was wounded several times before he was 21 years old. When he was a youth of 17, he went to the shell torn front in Flanders with the Warwickshire Regiment, from which he was transferred to the Royal Flying Corps in 1915, his bravery having won him much mention. Later he was appointed Private Secretary to the Chief of the Air Staff. In 1918, he came to Washington with the British Aviation Mission.

On returning to civil life, he entered the automobile industry as an engineer and then began driving in races. His first big victory came in 1921, when he won the 200-mile race of the Junior Car Club at Brooklands. During the next few years he participated in most of the great races in England and on the Continent. He won the French Grand Prix in 1923 and the Spanish Grand Prix in 1924. In March 1926, he made a speed record of 156 miles per hour in a special car built for him. This record was broken a short time later when Parry Thomas set up a record of 172 m.p.h. on land. Major Segrave built another special car with two motors each of 1,000 horsepower and at Daytona Beach, Florida, in March, 1927, he established a record of 203.79 miles per hour.

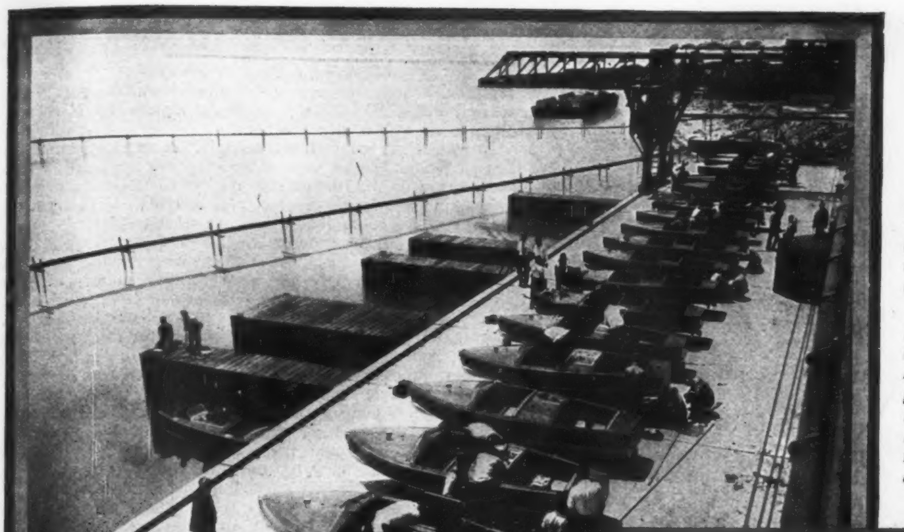
This record was bettered by Malcolm Campbell who carried it to 206.95 and by an American, Ray Keech, who established a record of 207.552 miles per hour. Again Major Segrave had a new car designed and built and it was in this car on March 11th, 1929, he established a record of 231.362 miles per hour on the beach at Daytona Beach, Florida.

Immediately after setting up this record, which still stands, Major Segrave announced that he was through with automobile racing and would turn his attention to motor boats in the future. The short period of time in which he has been interested in motor craft, has been fully as successful as his record on land. In his boat Miss England I, as already mentioned, he defeated Gar Wood at Miami Beach in March, 1929, although the victory was a technical one. In changes which Major Segrave made in Miss England I he nearly doubled her speed and defeated Gar Wood's Miss America VII at Italy last September.

Last year after his run over the sands at Daytona Beach, he said these prophetic words: "Man's precarious ventures in terrific speed are nearing the point where the laws of nature will say finally: 'Thus far and no farther.'"

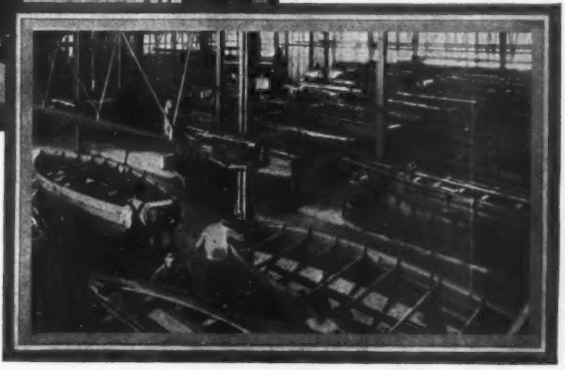
VEE-DRIVE

It has been a relatively short time since the new Vee-drive has been offered to the public, by the Gray Marine Motor Company of Detroit, Michigan, but these new units have been in the hands of users now long enough to indicate to the manufacturers that they are achieving instant popularity wherever they are seen and are rendering complete satisfaction. Among the many other desirable features which these new units possess is the fact that motor installation in the stern effects a great economy of space in the small boat which is always at a premium. Manufacturers of standardized runabouts have found that the use of this Vee-drive has enabled them to secure increased passenger capacity in a more desirable portion of the boat and many other benefits have arisen from this type of installation. A complete catalogue giving mechanical specifications and installation measurements has been prepared by the Gray Company, copies of which may be secured by writing them at 6910 East Lafayette Avenue, Detroit, Michigan.



Portion of the platform from which every Dodge Boat is water tested before being loaded for shipment. Export shipments are made direct by lighter from the plant.

A view of the assembly line at the new tidewater plant of Dodge at Newport News, Va., showing a part of the tremendous numbers of Dodge Boats in work every day. Boats are being completed faster than in any other boat plant in existence.



Quantity production

As you read these words, more complete boats are passing over this Dodge platform for final water test and shipment per day than has ever been accomplished by any other plant in the boat industry.

Quantity production alone is an achievement. It required courage, vast financial resources, and above all, faith and confidence in the future of a growing industry. Yet production of boats in great numbers was not alone enough to satisfy the pride of Dodge.

This partial view inside the new Dodge plants reveals at a glance why Dodge Boats are so beautiful. There is not one piece of machinery, not one single tool, more than a few months old. Nothing is compromised in making boats as fine as their designer dreamed

Corner of motor installation department in Dodge Plant.

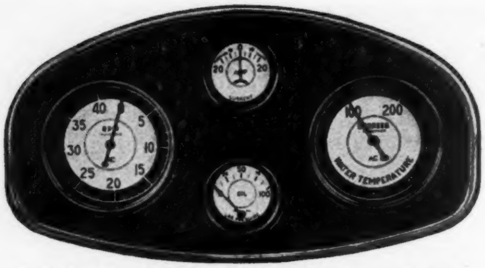
Only the most modern of tools and automatic machines are used to build these boats. At a single movement, modern automatic machines do the work of a dozen men —shearing minutes, hours and even days away from the time required to build a boat complete. It is no wonder that Dodge Boats, finer, better than ever before, can be built at prices that seem almost miraculously low.

Today Dodge Boats are speeding over waters in every corner of the earth. More boats, better boats, faster boats, at lower prices, have been the result of this great new tidewater plant. You are invited to see it—and you are invited to see Dodge Boats on display by Dodge Dealers everywhere.

If you would like to sell Dodge Boats—write at once. Dealers have hastened to secure the Dodge Boat franchise—and but few points are left open for appointment. Write today for a catalogue of Dodge Boats, and see if your territory is still open.

HORACE E. DODGE BOAT & PLANE CORP.
General Sales Department, 21 W. 46th St., New York, N. Y.
Works: Newport News, Va.

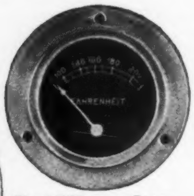
DODGE BOATS



Available in three, four and five-unit sizes in either a pattern brass design, richly lacquered black or a marine etched and silvered design. All instruments under glass and illuminated by indirect lighting

The AC Ammeter, flanged for individual mounting, registers 0 to 20 amperes charge and discharge

The AC Oil Pressure Gauge, flanged for individual mounting, is available in three ranges: 0 to 50, 0 to 100, and 0 to 120 pounds



The AC Thermo-Gauge, flanged for individual mounting, has a range of from 32° to 212° F. and comes with 12' or 20' of capillary tubing

The AC Tachometer, with brackets for individual mounting, is furnished in either clockwise or counter-clockwise movement and in four R. P. M. ranges, namely: 0 to 2500, 0 to 4000, 0 to 6000, and 0 to 8000.

NEW

and better Instruments

at new low prices

These fine panel instruments tell you just what you want to know in controlling your power plant.

If you prefer separate instruments for dash mounting, these too are available as shown by illustrations above. They are beautifully finished, accurate and reliable — all of AC quality.

Write today for complete descriptive folder and prices. In so doing, tell us what your requirements are and give us the name of your nearest dealer.

AC-SPHINX
Birmingham
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AC Spark Plug Company
Flint, *Michigan*

AC-TITAN
Clichy (Seine)
FRANCE

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AC INSTRUMENT PANELS
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AC TACHOMETERS
AC THERMO GAUGES
AC AMMETERS
AC AIR PRESSURE GAUGES
AC OIL FILTERS

YARD AND SHOP

SMALL BOAT BATTLES OCEAN WAVES

(*Continued from page* 94)

A remarkable ocean voyage of 455 miles from Newport News, Va., to Red Bank, N. J., has just been completed by Harold H. Brown, in a tiny open pleasure boat.

Mr. Brown, a graduate of Harvard, '97, is an old-timer in the handling of boats. He is a great believer in the future of long distance touring on our thousands of miles of coastal and inland waterways in small inexpensive motor craft. The boat he selected for this grueling test was a standard 16-foot Dodge runabout with a 40 horsepower, 4-cylinder engine, capable of a speed of over 30 miles an hour. Mr. Brown took the boat as it emerged from the assembly line at the Dodge factory in Newport News, Va. A huge crane dropped it overboard. Mr. Brown threw in his waterproof suitcase, a handful of charts, two 10-gallon cans of gasoline in addition to the thirteen gallons in the tank, and an extra supply of oil. He ran the little boat around a few miles in Hampton Roads and then was off on his long journey without further testing.

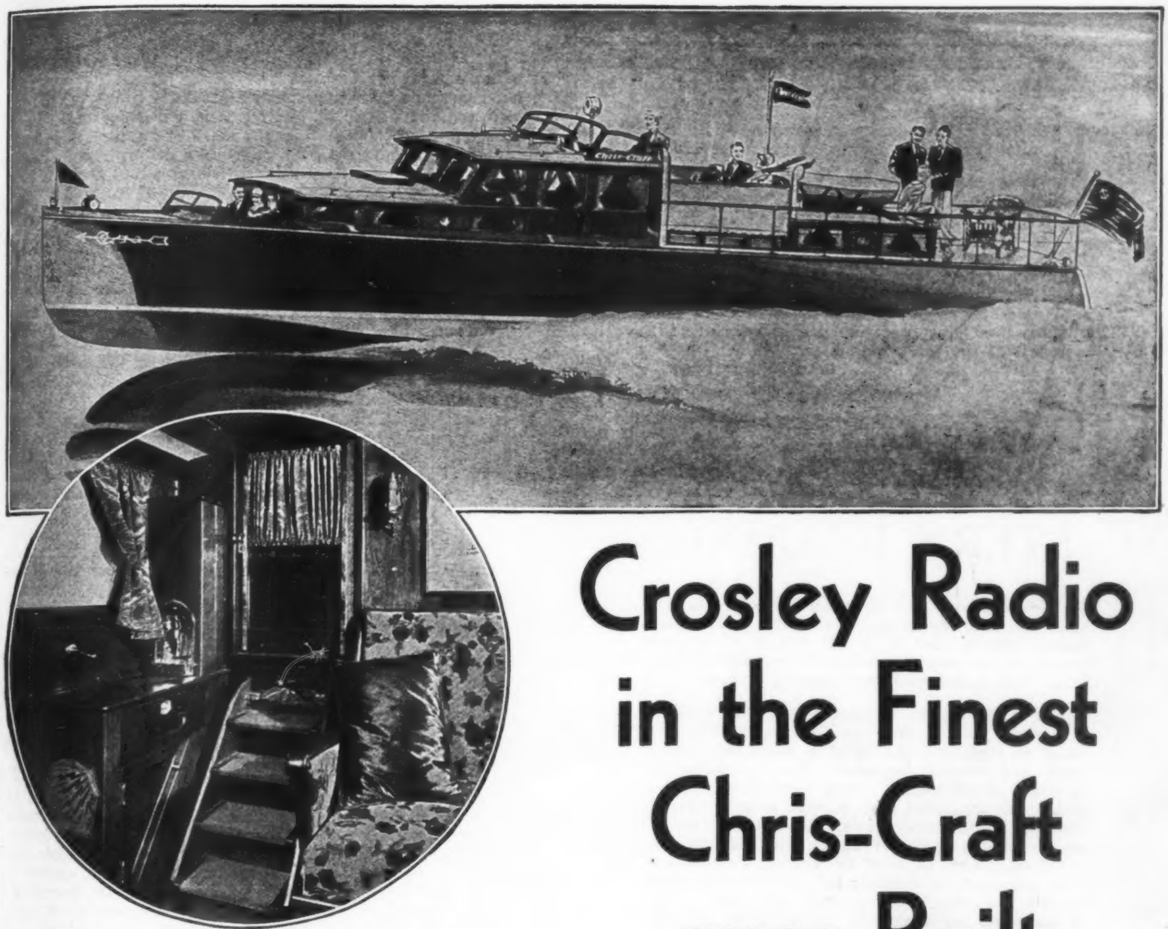
Over the wild waters of Chesapeake Bay, 107 miles to Solomon's was the first jump, the motor purring contentedly and the boat speeding over the waves without difficulty. The next day, the weather being too tempestuous for even the fishing fleet to set out, Mr. Brown started but, after a few miles decided the waves were too high for comfort and put back. The next day was somewhat calmer and Annapolis was reached without trouble. On the following morning, however, the wind had freshened into a stiff northwester and Mr. Brown found it necessary to call into play his expert knowledge of small boat operation. Running on the weather side of Chesapeake Bay, Mr. Brown and his tiny boat overtook a large freight steamer which was wallowing in the heavy sea. The captain thought Brown was in trouble and offered to haul him and his boat aboard. Brown refused this aid but ran for several miles in the lee of the steamer. The waves thrown by the larger vessel bothered him considerably so Brown finally darted out into the open sea and made for the Chesapeake and Delaware Canal at Chesapeake City. Running through the Canal at six miles an hour he stopped overnight at St. Georges. The next morning he arrived at Rush Point Bridge in a brisk northwest wind, reached the inlet at Cape May shortly after noon and later in the afternoon arrived at Ocean City, where he put up.

The next morning, in a heavy wind that had shifted to westerly, Mr. Brown turned the figureheaded prow of his little craft out into the open ocean for the run up the Jersey Coast. Keeping well off shore he passed Long Port, Atlantic City, Barnegat Inlet and Spring Lake, battling terrific waves which taxed his skill and forced him to beat a zig-zag course. At this point the operators of a big Loening amphibian plane of the Coast Guard observed Brown's little cockleshell and swooped down to within a few feet of him. Brown took one hand from the wheel long enough to wave reassuringly to the aviators who, figuring he knew how to take care of himself, zoomed off but returned at intervals to see how he was getting on. Late that afternoon Brown's boat rounded Sandy Hook and encountered the worst sea of the entire trip in getting to the inner bell buoy at Spermacetti Cove.

After the rough trip Mr. Brown said he was astonished at the manner in which the little open 16-footer had coped with the mountainous seas he encountered and he felt more certain than ever that long distance touring in small motor boats is a practical, enjoyable and inexpensive sport for boat lovers. The nearness of the hotels to the waterfront along the way and the excellent service available at waterside yacht clubs and filling stations in many parts of the United States, have convinced him that small boat touring is a recreation for the millions. Brown says it is exactly like touring by automobile from city to city, leaving the car in a garage over night, but with a marked absence of the congestion, petty annoyances and dangers of land touring.

Brown's trip was the result of a promise made by the Horace E. Dodge Boat and Plane Corporation to Captain C. P. Irwin of Red Bank, N. J., during the National Motor Boat Show, that one of his business associates would be allowed to drive one of the new Dodge 16-footers direct from the assembly lines at Newport News to Red Bank. On account of the newness of the motor Brown never ran it at its normal 3,400 revolutions but for most of the trip held it down to 2,500. The 455-mile journey including slowdowns for weather and for canal regulations, was accomplished in 28 hours 48 minutes of running time, at an average speed of 15.6 miles per hour. He used 70 gallons of gasoline from which he obtained 6.5 miles per gallon during the trip, using 2.4 gallons per hour of running time. He used 2 gallons of Duplex oil at the rate of 45.4 miles to the quart. H made the trip in leisurely jumps, leaving Newport News Saturday, May 17, and arriving at Red Bank on Thursday, May 22

(*Continued on page* 110)



IN CIRCLE: This illustration shows a Crosley Screen Grid Battery Receiver with Power Speaker as standard equipment in the new CHRIS-CRAFT YACHT, Model 123, the finest CHRIS-CRAFT ever launched and the flagship of that famous fleet, shown under way above.

Crosley Radio in the Finest Chris-Craft ever Built

WHEN the builders of the new CHRIS-CRAFT YACHT, the finest CHRIS-CRAFT ever launched, sought a battery receiving set to equal in its performance that of their prideful craft, they selected the CROSLEY Screen Grid Battery Receiver and Power Speaker.

While the installation of Crosley Screen Grid Battery Radio in water-craft is not as costly as other similar installations, it is a notable fact that you'll find Crosley Radio in the finest craft afloat. In the adoption of Crosley Radio by boat builders as standard equipment, quality of performance alone has been the deciding factor. At the last New York show there were eighteen boat builders of national reputation who displayed models equipped with Crosley Radio, either as standard equipment or as an added accessory. It can be installed in your present boat or specified to be built into any craft you may purchase. It is fully shielded from all motor noises and is free from outside electrical disturbances. Your Crosley dealer can supply you with full information.

THE CROSLEY RADIO CORPORATION POWEL CROSLEY, JR., *President* **CINCINNATI, OHIO**

Home of *"the Nation's Station"*, WLW

You're *THERE* with a Crosley

CROSLEY RADIO

BEARING troubles are always annoying, often expensive, and sometimes dangerous.

It is wrong to assume that bearing troubles are inevitable. Insurance against them requires only a little forethought, combined with a sufficient amount of mechanical knowledge to understand the conditions under which a submerged stern bearing is called upon to operate, and to recognize the means employed in the design of Hathaway Bearings to insure freedom from all of the troubles that have beset stern bearings since the inception of the screw propeller.

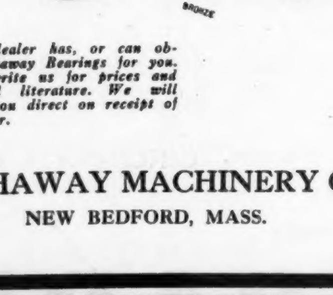
The Hathaway

Resilient, Flax Packed

STERN BEARING

has demonstrated for over fifteen years, to the best informed designers, yachtsmen and fishing vessel owners, that it is the one type of stern bearing in the design of which all bearings troubles have been anticipated and guarded against.

The Hathaway is, because of the flax cushion, absolutely vibrationless and forever free from metal to metal pound. Shaft is protected against wear and scoring by sand. No possibility of seizing or vulcanizing from overheating. Flax packing, impregnated with paraffin insures perfect lubrication. Excessive heat melts an excess of paraffin on the shaft, serving to cool and lubricate it without harm to shaft or bearing. Repacking, when necessary, is a simple job, which can be done without removing bearing from the boat. Cost of materials for repacking 75c to $1.50. Actual tests have shown one to five years hard steady service, without repackings. No other type of bearing can even approximate the authentic records of trouble free performance that has been made by Hathaway Bearings. Proof will be furnished gladly to anyone who requests it.



Your dealer has, or can obtain Hathaway Bearings for you. If not, write us for prices and illustrated literature. We will ship to you direct on receipt of your order.

HATHAWAY MACHINERY CO.
NEW BEDFORD, MASS.

CHRIS-CRAFT REORGANIZED AS CORPORATION

No more romantic business story ever filtered its way into the news columns than the romance of Chris Smith, prominent figure in the boating world, and his sons and grandsons.

Chris Smith was a pioneer years ahead of his time. He built motor boats when the world didn't want motor boats. Fifty-two years ago he specialized in duck boats. Later he built row boats and sail boats. Then in 1896 he decided to build a boat powered with a gasoline engine, a decision which marked the beginning of the motor boat industry.

The general public was not ready for fast motor boats so Chris Smith and his sons, Jay and Bernard, turned to racing, building in 1911 Reliance III, a winner that marked the company's entry into the racing field. From 1914 to 1923, 10 consecutive Gold Cup winners and 2 Harmsworth International Trophy winners, Miss America I and II, marked Chris-Craft's progress. During the same period the famous Miss Detroits, Baby Speed Demons and Packard Chris-Crafts, added further fame to the Chris-Craft racing record.

Then Chris Smith's desire to build fast family motor boats for general service caused the company to abandon their racing activities and enter the field of standardized boat production. For 8 years Chris-Craft business has been confined to this type of boat. Residents of Algonac have seen the old boat works sprout new buildings at frequent intervals until the present plant rivals the mammoth manufacturing plants of its near-by metropolis, Detroit. The peaceful channels of St. Clair Flats are daily torn by dozens of speeding Chris-Craft being tested before shipment. Drowsing along in its rural setting, Algonac has wakened to find itself the site of one of the greatest industries of the world.

In 1922 the capital of the Chris Smith & Sons Boat Company was $8,000—plus three generations of boat-trained Smiths. The growth of the company, out of earnings, without refinancing, to a business of many millions is an event of importance not only to placid Algonac but to financial pessimists who said boats were luxuries and that people simply would not buy enough of them to build any such manufacturing business.

Sales, according to Jay W. Smith, president and general manager, have continued to surpass his most optimistic estimates as well as to baffle those timid souls who thought that motor boats could never be manufactured and sold in volume. Nobody knows whether, like the great growth of motion pictures, people buy luxuries in good times or bad but the truth of the matter is that motor boat sales are mounting, depression or no depression. The upward trend of Chris-Craft sales, unbroken since 1922, has recently taken a still more pronounced upward turn. In 19 2 sales were $53.825; in 1923, $67,642; in 1924, $165,485; in 1925, $431,737; in 1926, $523,391; in 1927, $1,339,109; in 1928, $2,037,218; in 1929, $3,254,923. Thus far in 1930 records show gains every month as compared to corresponding months last year.

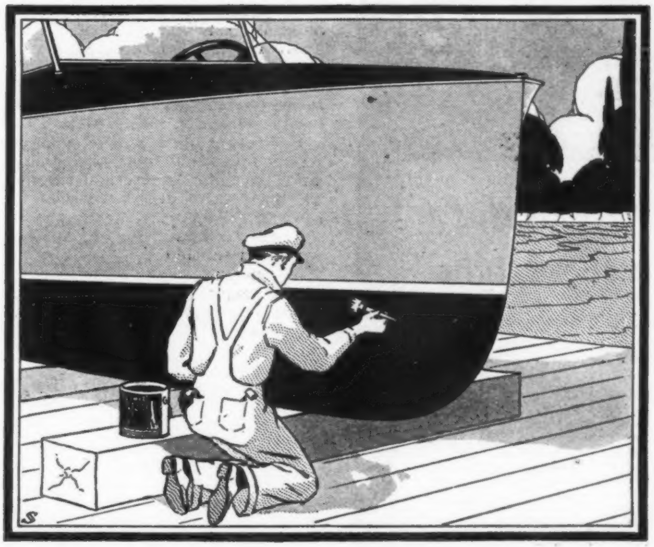
So, what was once nothing more than a cherished ambition to Chris Smith is now to be made a reality through the formation of Chris-Craft Corporation, a greatly enlarged company to manufacture and market Chris-Craft motor boats.

Working control and management of the newly formed company remains in the hands of the present Smith family. Chris Smith, founder of the original company and now Chairman of the Board of Directors, will continue as Chairman of the Board of the new organization. Jay W. Smith, his son, and for the last several years active head of the company, will continue as president and general manager. Directors, in addition to these two individuals, will include Bernard Smith and Owen Smith of Algonac, and a newly elected director, Robert Heller of New York City, representing the bankers, Childs, Jeffries & Co., Inc.

Upon completion of the expansion program application will be made to list the stock on the New York Curb Exchange, thereby opening up to the public an investment opportunity in a comparatively new and rapidly growing industrial field. Only one class of stock, no par value common, will be issued. This is the first financing, other than out of earnings, that has ever been done by the company. This expansion program comes as a result of successive years of rapid growth.

Marked expansion is planned in the distribution of Chris-Craft products. Sales representation is already enjoyed in practically every city in the United States where local waters permit boating, and in many of the important over-seas markets. A still more intensive cultivation of both domestic and foreign markets is contemplated for the future.

In noticeable contrast to the general hesitancy in current business activity, Chris-Craft plants are and have been running at capacity to meet the demand from record sales. Highway congestion has made the modern power boat desirable. Shipments are at the present time running substantially ahead of last year, a banner year in the history of the company.



ANTI-FOULING BOTTOM PAINTS

CLIMAX BOTTOM PAINTS are made to a special, exclusive formula, which produces a finish most impervious to both salt and fresh water. Extremely smooth, hard, and durable, contributing greatly to speed and anti-fouling. Made in three attractive shades of green. CLIMAX HARD RACING BOTTOM PAINTS for speed boats, runabouts and commuters, are the fastest and most permanent bottom finishes made. Will not soften in water. Supplied in a handsome red or green. Unexcelled, too, are CLIMAKOTE, the flat coater, and CLIMAX YACHT WHITES and BLACKS. Use Climax Paints for beauty, durability, economy—enduring satisfaction. On sale from coast to coast.

THE CLIMAX CLEANER MFG. CO., CLEVELAND, OHIO

DISTRIBUTORS: E. J. Willis Co., 85 Chambers Street and 67 Reade Street, New York, N. Y.—Armstrong & Galbraith, Inc., 373 Fourth Avenue and 79 Barclay Street, New York, N. Y.—Stearns Marine Service Co., 40 Broad Street, Boston, Mass.—Chase Parker Co., Inc., 288 Congress Street, Boston, Mass.—Atlantic Radio & Marine Co., 20 Brookline Avenue, Boston, Mass.—Weisgerber Paint & Varnish Co., 28 E. Larned Street, Detroit, Mich.—The C. J. Hendry Co., San Francisco, San Pedro and San Diego, Cal.—Pacific Marine Supply Co., Seattle, Wash.—Emil Aarup, 5111 South Main Street, Los Angeles, Cal.—Beebe Co., Portland, Ore.—J. W. Magnus, 155 King Street, Toronto, Ontario, Canada.

CLIMAX
BOAT PAINTS

"Half-Mile -Ray"

"Oft in the Still Night"

fond memory fails to shed practically helpful light on the location of the landing you are trying to make or the rock you hope to avoid.

"Half-Mile-Ray" — Sure, reliable, flexible, is standard equipment on such craft as Banfield, Chance, Chris-Craft, Elco, Wheeler, Humphrey, Matthews, Richardson, Rochester, — a guarantee of quality and dependability!

Uninterrupted service in all kinds of weather. Sturdy construction, full insulation of all electrical connections, and a brilliant 300,000 candle-power beam.

There is a "One-Mile-Ray" for longer range, and "Quarter-Mile Ray" for outboard motor boats.

Positive Control. Absolutely Weather-proof. Certain Range. Piercing Power. Beauty of Line. Safe!

A Portable Searchlight for every marine purpose.

$10 *to* $125

Also exclusive marine distributors for North-east (Whistletone) HORNS and Sirene SIRENS

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Quick, positive pilot house control. 8 inch drum. Brass or Khaki Enamel —$60

The PORTABLE LIGHT CO. Inc
12 Warren Street,
NEW YORK, N.Y.

YARD AND SHOP

(*Continued from page* 106)

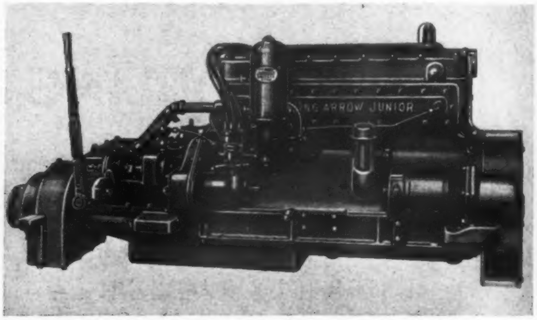
NEW REDUCTION GEAR JOB

An accompanying illustration pictures the newest model to come from the shops of the Red Wing Motor Company—a Thorobred model incorporating into its design a built-in Morse reduction gear. It is the standard 6-cylinder, 4-cycle Arrow Jr. model 3⅜ bore and 4¾ stroke, developing 35-70 h.p. The built-in reduction unit permits normal motor speeds of 1,400 to 2,200 r.p.m., delivering from 700 to 1,100 to the wheel.

The gear is not tacked on as an after-thought, but is especially designed and built for this engine with a suitable housing which makes it a neat integral part of the motor. It is rigid, compact and quiet, with every provision made to insure long life and absolute reliability. The gear hangers line up with the engine supports both as to width and height, making the installation problem a simple one.

The overall length of this reduction gear model is only 5½ inches longer than the Arrow Jr. without the gear, or, to be exact, 57 inches overall, which is especially noteworthy in view of the fact that the construction also includes an extra heavy reverse gear. The center of the reduction gear shaft line to the propeller is 1½ inch lower than the crankshaft center. The gear housing is water jacketed and the gears themselves run in oil. Bearings are oversized and adequate thrust bearings are built in. Weight complete with iron base is 900 pounds; with aluminum base only 800. Twin screw pairs are also available.

The same reduction gear feature may also be had in 2:1 ratio for the Arrow 40-80 h.p. Red Wing, an engine with 3¾-inch bore and 4½-inch stroke.



Red Wing now supplies the 35-70 h.p. Arrow Junior with built-in 2 to 1 Morse reduction gear

A COMFORTABLE CRUISER

The new Corsair 36, fast cruiser built by the Corsair Boat Company of Detroit, at its extensive yards at Trenton is from designs by a famous firm of naval architects. It is the last word in workmanship, comfort, seaworthiness and appearance. Only the finest materials enter into its construction and these are assembled by master boat builders, most of whom have grown up in this industry. Six feet longer than the popular 30-footer, Corsair Cruisader, which also is in production, the 36-footer is a graceful, racy looking craft, the embodiment of the latest approved motor boat practices.

Speed averaging 23 miles per hour is furnished by a Scripps 200 h.p. motor. The displacement type of hull adds materially to comfort. The deck house of the Corsair 36 is designed along the line of the finest custom automobile bodies. It is also built with open deck.

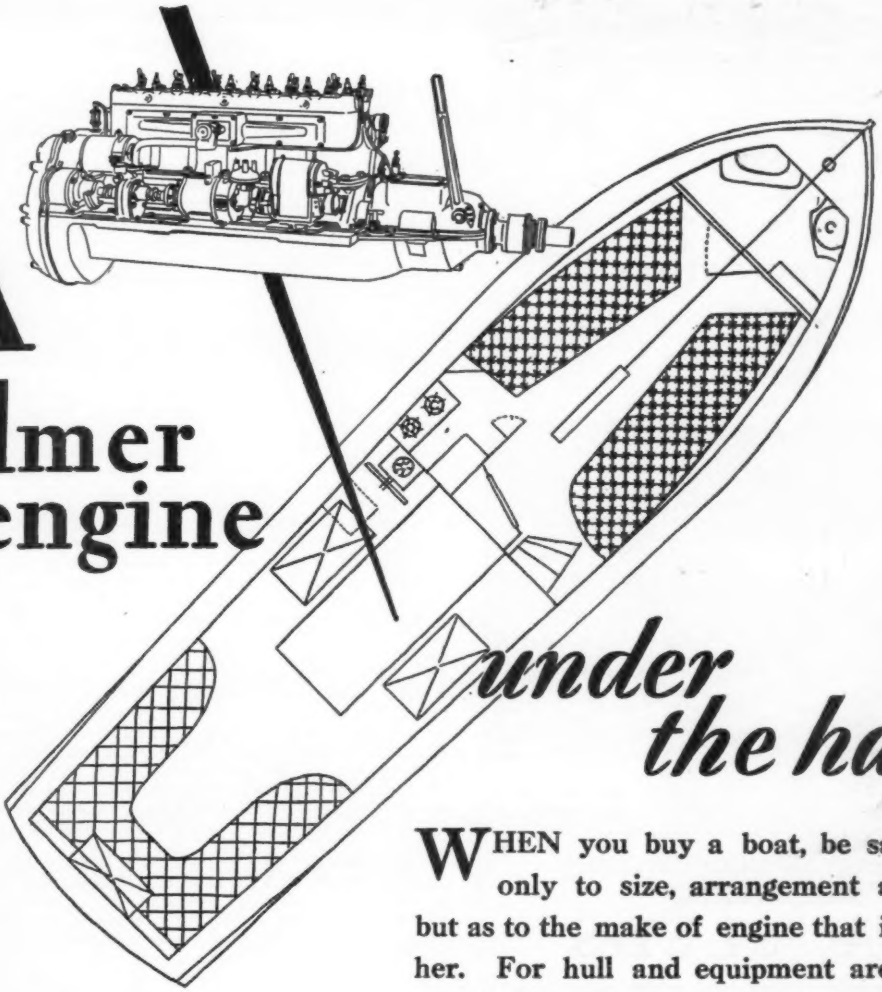
The cabin is provided with two Pullman berths accommodating four and in the snug galley a thermos food container supplements the regular equipment. Dual steering control is a new feature, as is also the Tattler, which acts as a warning signal when gas and oil are low. A positive safety device controls the refilling of the gasoline tank. These models are fully equipped with linens, dishes and silverware.

GRADY IN NEW CONNECTION

Announcement is made by the Atlantic Radio and Marine Company of 20 Brookline Avenue, Boston, Mass., to the effect that E. J. Grady is now connected with their organization as sales representative in the field. Mr. Grady brings to his position a broad experience secured from a number of years in various phases of the marine industry.

(*Continued on page* 118)

A Palmer engine



under the hatch

When you buy a boat, be satified not only to size, arrangement and finish, but as to the make of engine that is to drive her. For hull and equipment are only enjoyed when the power plant is satisfactory.

Insist that the standardized boat you buy is equipped with a Palmer Engine. The builder can tell you that for thirty-five years, Palmer Bros. have built trouble-free engines that give the full rated horsepower. He knows that a Palmer Engine will make the boat he builds perform better.

The Palmer Line

YT1—1-cylinder	2 h.p.
PNR1—1-cylinder	6 h.p.
PNR2—2-cylinder	12 h.p.
PNR3—3-cylinder	18 h.p.
PNR4—4-cylinder	24 h.p.
ZR1—1-cylinder	7 h.p.
ZR2—2-cylinder	18 h.p.
ZR3—3-cylinder	30 h.p.
ZR4—4-cylinder	40 h.p.
F2—2-cylinder	18 h.p.
F3—3-cylinder	25 h.p.
F4—4-cylinder	35 h.p.
F6—6-cylinder	50 h.p.
NK2—2-cylinder	25 h.p.
NK3—3-cylinder	35 h.p.
NK4—4-cylinder	50 h.p.
NK6—6-cylinder	80 h.p.
Little Huskie—4-cyl.	15 h.p.
Power-Boy Six—6-cyl.	40 h.p.
P. A. L.—4-cylinder	25 h.p.
Green Witch—6-cyl.	150 h.p.

PALMER BROS. ENGINES, Inc.
COS COB, CONN.

DISTRIBUTORS:

New York, N. Y.
89 Third Ave. between 12th and 13th Sts.
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Portland Pier
Portland and Astoria, Ore.
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Baltimore, Md.
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Gas Engine & Boat Corp.
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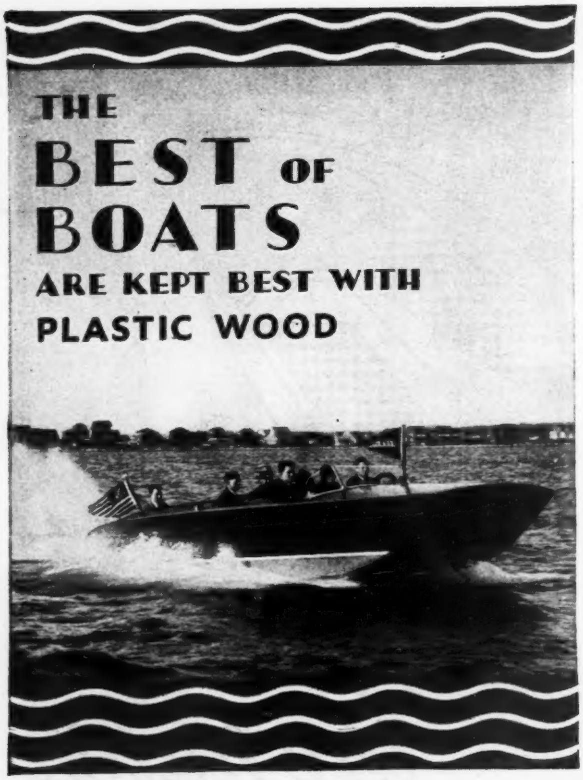
Jacksonville, Fla.
112 South Ocean St.
San Francisco, Calif.
Boardman and Flower
1740 Van Ness Ave.
Miami, Fla.
B. E. Schubert, 1008 North West 8th St. Road
Tampa, Fla.
Ft. of Whiting St.



SEA SLEDS have proved themselves one of the ablest all-round crafts afloat, because of their ability to meet all conditions of weather.

THE SEA-SLED CORPORATION
Manufacturers of
SEA SLEDS

The finer finish a boat has when new, the quicker she will show digs and scars from use. Instant, invisible and permanent repairs are readily made with Plastic Wood, even by the novice.

No special tools are necessary; it holds lastingly to any dry, clean surface, and finishes perfectly. Once you know its manifold uses you can not afford to be without it if you want to keep a good boat looking right. Keep a can aboard.

PLASTIC WOOD

PLASTIC WOOD
Reg. U.S. Pat. Off.

At Ship Chandlers, Hardware and Paint Stores

Our Engineering Department will gladly answer any specific questions as to the adaptability or use of Plastic Wood in Boat Repair or Construction.

Send for free 24-page booklet on Plastic Wood for Boat Repair and Construction

ADDISON-LESLIE CO., 26 Bolivar St., Canton, Mass.

LUMBER FOR SMALL BOAT BUILDING

By E. M. Angus

THERE are so many small boats built in sections of our country where special boat building lumber is not obtainable that a few words regarding sensible substitution might not be amiss.

First of all and of the greatest importance is to determine just the duty a particular part of the structure must perform, then by the process of elimination the various qualifications of different species may be weighed against each other and the one presenting the most important good qualities selected. It must be kept in mind at all times that there is no real substitute for the best and that a few shortcomings will in nearly every instance be apparent.

Let us hope that the amateur boat builder has become wise enough to always build to published plans. Such plans cover every type of craft any one could wish for, and at this advanced stage of the industry it is folly to attempt an improvement on designs that are tried and proven. MoToR BoatinG's Ideal series is inexpensive, very complete and if only an eight-foot dink is to be built the price of the plans are paid for tenfold. The writer speaks from experience along this line as it has been his pleasure to complete several of the Ideal series boats, each of which was a complete success.

Let's start at the bottom and work up. The keel must be strong, stiff and hold fastenings well. Good white oak is, of course, the first selection, but in a timber over two inches thick and over sixteen feet long it is mighty hard to buy. Good dense long-leaf yellow pine makes fine keel timber, having enough of the good qualities of oak and its own individual merits in the form of waterproofness, straight grain and clear of knots. The heart wood only should be used, as the bright, lighter sapwood nearer the bark of the tree lacks everything that would make a suitable keel. The third selection would be Douglas Fir, a wood of medium weight, good strength and well adapted for under water parts. Douglas Fir is more easily obtained than oak and can be purchased in any length or thickness. The tendency of fir to twist or warp is slight, and from the standpoint of durability it is equal to oak as its tendency toward dry rot is little. On the little runabouts and outboards, spruce and ash are used with success generally because the designer has based his dimensions on scientific principles and made his fastenings of the through type.

The frame or ribs, if steam bent, should be good straight grained white oak. The sizes are generally small and if any oak is obtainable at all it will usually be of sufficient sizes for the average small boat. Don't be alarmed if the material is not dry. In fact, purchase this stock only partly dry as the bending process will be much more of a success. Oak from 20 to 25 percent moisture content lends itself much better to steam bending. If the boat in question uses sawn frames there is still hope of using oak due to the small thickness required, but yellow pine or fir does not make good frames even if necessary to increase the thickness around 25 percent.

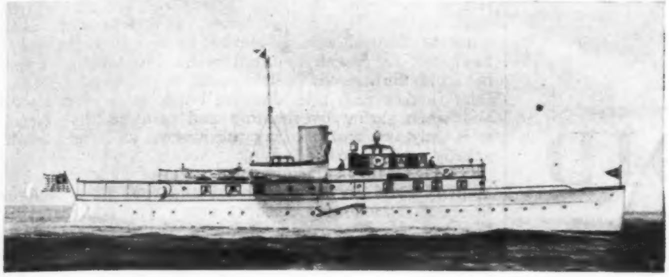
Floor timbers may be made of yellow pine or fir or may be alternate oak and fir. Several builders use fir floors with oak caps where engine bearers rest. The sawn frame boat may well use two light floors bolted on either side of the frame. Two advantages of grain are obtained with a total area of great proportion toward the planking. White ash or maple is often times used as both are strong and are not seriously affected by bilge water.

The chine pieces are often specified in oak, but due to their length are generally hard to obtain. The two-piece chine simplifies this item as the inner chine may be fir and the outer piece oak. This outer piece will be comparatively small as compared to the inner chine and even may be made in two lengths without any serious results. The inner or heavy part carries the load and strain while the outer piece acts as a rabbet and as hard rub surface on the outer edge.

Decks and wash rails are generally covered with canvas in which case spruce makes a very fine job. Strips about an inch wide by the specified thickness may be edge nailed as well as face nailed to the deck beams and their size will allow bending into most any curve. Sap pine, properly painted, will make a good deck if covered, as its continued dry condition will prevent softening and rotting. If decks are to be bare, edge grain fir makes a very presentable job and will take and hold any kind of finish. Natural finished fir decks are very attractive providing nothing but uniform color edge grain material is used.

Cabin tops are, of course, canvas covered, which means protection for the decking under. Strength is of importance in this case and so is light weight. Good white pine tongued and grooved or even short leaf sap pine are very good for this work, as there are seldom instances where carlins are spaced over twelve inches.

(Continued on page 114)



Comfort . . .

The engine is the most important contributor to yachting comfort and pleasure. Through unique improvements in materials and design, TREIBER Diesels average about one-sixth the weight and occupy about one-third the space of earlier Diesels, without sacrificing strength or horsepower. The experience of yachtsmen and designers has helped to establish for these unusual Diesels an enviable reputation for Safety, Endurance, Cleanliness, Comfort and Speed. Send for bulletins completely describing the engines in which you are interested.

ENGINES

REVERSE GEAR TYPE

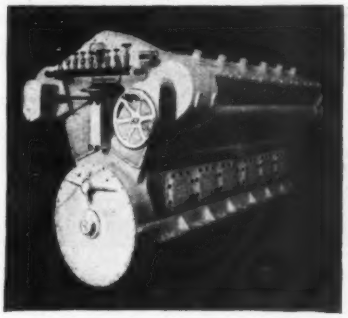
4 cyl. 65 H. P.
6 cyl. 100 to 225 H. P.
12 V-cyl. 200 to 450 H. P.

DIRECT REVERSIBLE TYPE

6 cyl. 225 to 1500 H. P.
12 V-cyl. 450 to 3000 H. P.

ELECTRIC GENERATING SETS

1 to 6 cyl.—7½ to 70 K. W.



DISTRIBUTORS

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Noyes Marine Company
305 Congress Street

NEW YORK, N. Y.
Smith-Meeker Engineering Co.
123 Liberty Street

WASHINGTON, D. C.
Commercial Engineering Co.
1800 E. Street, N. W.

MIAMI, FLORIDA
Llewellyn Machinery Corp.
1030 N. Miami Avenue

HOUSTON, TEXAS
Tracy S. Park
Second National Bank Building

LOS ANGELES, CALIFORNIA
Charles E. Smith
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SAN FRANCISCO, CALIFORNIA
Thomson Machine Works
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VANCOUVER, B. C.
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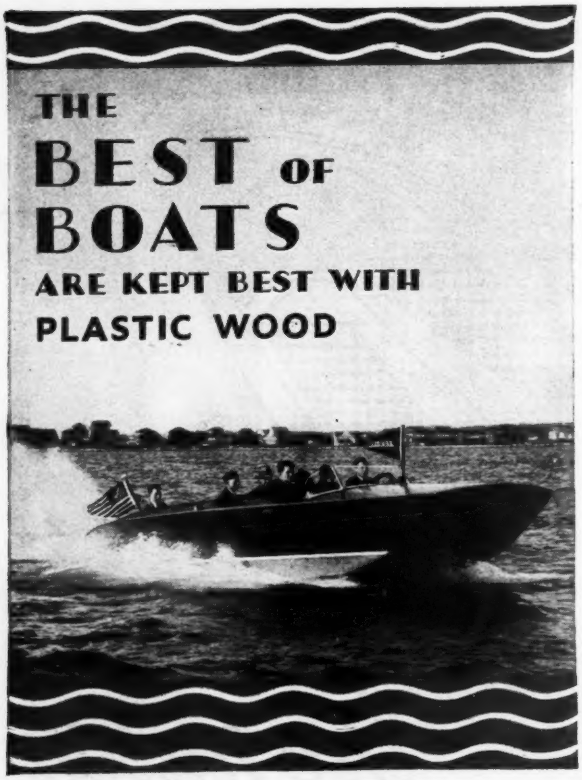
1955 Georgia Street, West

TREIBER DIESEL ENGINE CORP.

DEPT. M. B. CAMDEN, N. J. U. S. A.

CABLE ADDRESS: DESELMOTOR

FAST - SAFE - CLEAN - ECONOMICAL - QUIET - SMOOTH



SEA SLEDS have proved themselves one of the ablest all-round crafts afloat, because of their ability to meet all conditions of weather.

THE SEA-SLED CORPORATION
Manufacturers of
SEA SLEDS

The finer finish a boat has when new, the quicker she will show digs and scars from use. Instant, invisible and permanent repairs are readily made with Plastic Wood, even by the novice.

No special tools are necessary; it holds lastingly to any dry, clean surface, and finishes perfectly. Once you know its manifold uses you can not afford to be without it if you want to keep a good boat looking right. Keep a can aboard.

PLASTIC WOOD
Reg. U.S. Pat. Off.

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PLASTIC WOOD

LUMBER FOR SMALL BOAT BUILDING

By E. M. Angus

THERE are so many small boats built in sections of our country where special boat building lumber is not obtainable that a few words regarding sensible substitution might not be amiss.

First of all and of the greatest importance is to determine just the duty a particular part of the structure must perform, then by the process of elimination the various qualifications of different species may be weighed against each other and the one presenting the most important good qualities selected. It must be kept in mind at all times that there is no real substitute for the best and that a few shortcomings will in nearly every instance be apparent.

Let us hope that the amateur boat builder has become wise enough to always build to published plans. Such plans cover every type of craft any one could wish for, and at this advanced stage of the industry it is folly to attempt an improvement on designs that are tried and proven. MoToR BoatinG's Ideal series is inexpensive, very complete and if only an eight-foot dink is to be built the price of the plans are paid for tenfold. The writer speaks from experience along this line as it has been his pleasure to complete several of the Ideal series boats, each of which was a complete success.

Let's start at the bottom and work up. The keel must be strong, stiff and hold fastenings well. Good white oak is, of course, the first selection, but in a timber over two inches thick and over sixteen feet long it is mighty hard to buy. Good dense long-leaf yellow pine makes fine keel timber, having enough of the good qualities of oak and its own individual merits in the form of waterproofness, straight grain and clear of knots. The heart wood only should be used, as the bright, lighter sapwood nearer the bark of the tree lacks everything that would make a suitable keel. The third selection would be Douglas Fir, a wood of medium weight, good strength and well adapted for under water parts. Douglas Fir is more easily obtained than oak and can be purchased in any length or thickness. The tendency of fir to twist or warp is slight, and from the standpoint of durability it is equal to oak as its tendency toward dry rot is little. On the little runabouts and outboards, spruce and ash are used with success generally because the designer has based his dimensions on scientific principles and made his fastenings of the through type.

The frame or ribs, if steam bent, should be good straight grained white oak. The sizes are generally small and if any oak is obtainable at all it will usually be of sufficient sizes for the average small boat. Don't be alarmed if the material is not dry. In fact, purchase this stock only partly dry as the bending process will be much more of a success. Oak from 20 to 25 percent moisture content lends itself much better to steam bending. If the boat in question uses sawn frames there is still hope of using oak due to the small thickness required, but yellow pine or fir does not make good frames even if necessary to increase the thickness around 25 percent.

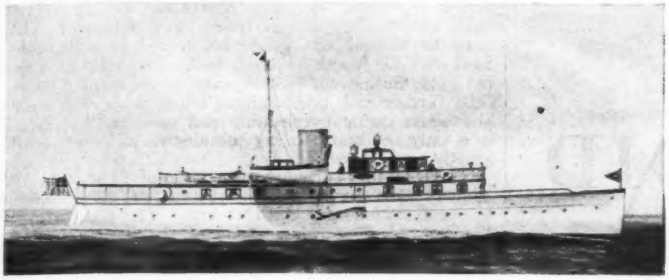
Floor timbers may be made of yellow pine or fir or may be alternate oak and fir. Several builders use fir floors with oak caps where engine bearers rest. The sawn frame boat may well use two light floors bolted on either side of the frame. Two advantages of grain are obtained with a total area of great proportion toward the planking. White ash or maple is often times used as both are strong and are not seriously affected by bilge water.

The chine pieces are often specified in oak, but due to their length are generally hard to obtain. The two-piece chine simplifies this item as the inner chine may be fir and the outer piece oak. This outer piece will be comparatively small as compared to the inner chine and even may be made in two lengths without any serious results. The inner or heavy part carries the load and strain while the outer piece acts as a rabbet and as hard rub surface on the outer edge.

Decks and wash rails are generally covered with canvas in which case spruce makes a very fine job. Strips about an inch wide by the specified thickness may be edge nailed as well as face nailed to the deck beams and their size will allow bending into most any curve. Sap pine, properly painted, will make a good deck if covered, as its continued dry condition will prevent softening and rotting. If decks are to be bare, edge grain fir makes a very presentable job and will take and hold any kind of finish. Natural finished fir decks are very attractive providing nothing but uniform color edge grain material is used.

Cabin tops are, of course, canvas covered, which means protection for the decking under. Strength is of importance in this case and so is light weight. Good white pine tongued and grooved or even short leaf sap pine are very good for this work, as there are seldom instances where carlins are spaced over twelve inches.

(Continued on page 114)



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4 cyl. 65 H. P.
6 cyl. 100 to 225 H. P.
12 V-cyl. 200 to 450 H. P.

DIRECT REVERSIBLE TYPE

6 cyl. 225 to 1500 H. P.
12 V-cyl. 450 to 3000 H. P.

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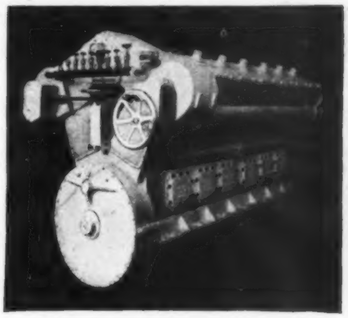
1 to 6 cyl.—7½ to 70 K. W.

Comfort . . .

The engine is the most important contributor to yachting comfort and pleasure. Through unique improvements in materials and design, TREIBER Diesels average about one-sixth the weight and occupy about one-third the space of earlier Diesels, without sacrificing strength or horsepower. The experience of yachtsmen and designers has helped to establish for these unusual Diesels an enviable reputation for Safety, Endurance, Cleanliness, Comfort and Speed. Send for bulletins completely describing the engines in which you are interested.



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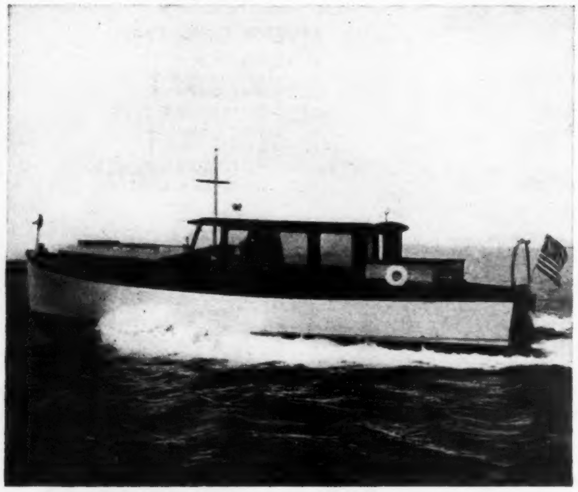

36 foot combination Sedan Cruiser "Playmate." Powered with 200 H. P. Sterling engine. Speed: 21 miles per hour.

ON many of its fine, custom-built yachts and cruisers, the Wheeler Shipyard uses Russialoid for upholstery and trim.

Russialoid is not only very durable and immune to water, gasoline, oil and alcohol—but it is smart looking too, and the wide range of colors in which it is supplied makes it available for any decorative scheme.

THE PANTASOTE COMPANY
INCORPORATED
250 PARK AVENUE
NEW YORK

YARD AND SHOP

(*Continued from page* 112)

LUMBER FOR SMALL BOAT BUILDING

To steal William Atkins' thunder and say that "All that glitters is not gold," certainly covers the subject of trunk cabin sides and combing to perfection. If bright work above decks must be natural, one is almost limited to mahogany. Oak is used, but the width required is hard to obtain. Cypress does not hold finish well, is heavy and is prone to raise its grain a little further each tide. Painted trunk cabin sides look excellent and when spring overhauling and painting time comes around it is only necessary to say the absence of bright work will be greatly appreciated.

Now for the all important item of planking. At present builders from north, south, east and west have their own local materials which they consider best. The consensus of opinion, however, leans to white cedar of the variety common to the state of Virginia. Mahogany is running a good race for first place and has several excellent qualities in its favor. The southern boat uses yellow pine and cypress. The eastern or northern boat uses cedar, mahogany and yellow pine with some fir. The western builder uses fir, Port Orford cedar, and spruce. Many good hulls are planked with Idaho white pine. Most any of the above mentioned species are suitable and some one of them can no doubt be obtained by every builder. The runabout has brought natural finished mahogany planking into its own, but somehow the glistening white top sides still get the call from a lot of us.

A word might be in order regarding the use of plywood, built up panel stock and laminated strain members. Plywood, of course, adapted itself more to yacht furniture and must be very carefully finished to hold the veneer on. Panel stock is generally three-ply fir with waterproof glued joints and certainly makes a very fine bulkhead, locker, hatch or standing top decking when properly braced and finished. Laminated keels, aprons, chines, clamps, carlins, etc., etc., are just coming into common use, probably due to the fact that airplane research has proven their worth. Built up parts are exceptionally strong and are very durable if put together properly with paint or marine glue. There is always the benefit of as many different grains as there are pieces and splitting is almost unknown.

When you build that boat, first get reliable plans. Lay the patterns down full size. Buy good material. Paint every joint before assembly. Finish it neatly. After launching take good care of her and you will have started upon a cruise or a ride that will take you to more ports of pleasure than are shown on any chart. Your investment will be protected by a hobby. You will join the ranks of, and be a credit to, the world's most fascinating and congenial sport.

The 17-foot Chris-Craft is comfortable and dry at all speeds. Its easy control is typical of all Chris-Craft

RECREATIONAL ATTRACTIONS OF NEW BRUNSWICK

In an attractively arranged 166-page publication containing 33 photographs, 10 sketch maps, and a general map in color, which has just been issued by the Department of the Interior, Canada, is given detailed information about the natural resources of the province of New Brunswick and the opportunities they present for an industrial activity very much greater than has hitherto been attained in that maritime country.

Of particular interest to readers of this periodical will be the section of the publication relating to the province's recreational resources. Not many places can offer such attractions as does New Brunswick, to the yachtsman, to the hunter, and to the fisherman. The number of moose and deer to the square mile is greater than in any other part of the American continent and rarely elsewhere does the Atlantic silver salmon provide such excellent sport.

This publication can be obtained from the Director, Natural Resources Intelligence Service, Department of the Interior, Ottawa, Canada.

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World's Largest Builders of All-Mahogany Motor Boats

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Notable names, these, familiar to boating enthusiasts the world over—symbols of quality the manufacturers proudly add to their craft.

It is only logical that Erico and Kainer Specialties, with their dependable construction and snappy appearance, are found on boats such as these.

Builders everywhere know that using Erico and Kainer Specialties adds immeasurably to the trim lines of any boat—another SURE way to owner satisfaction.

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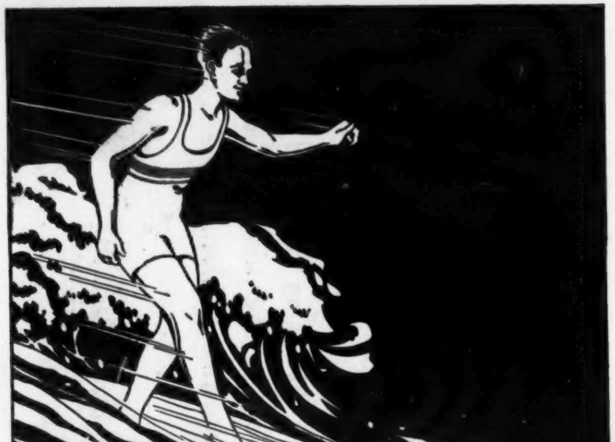
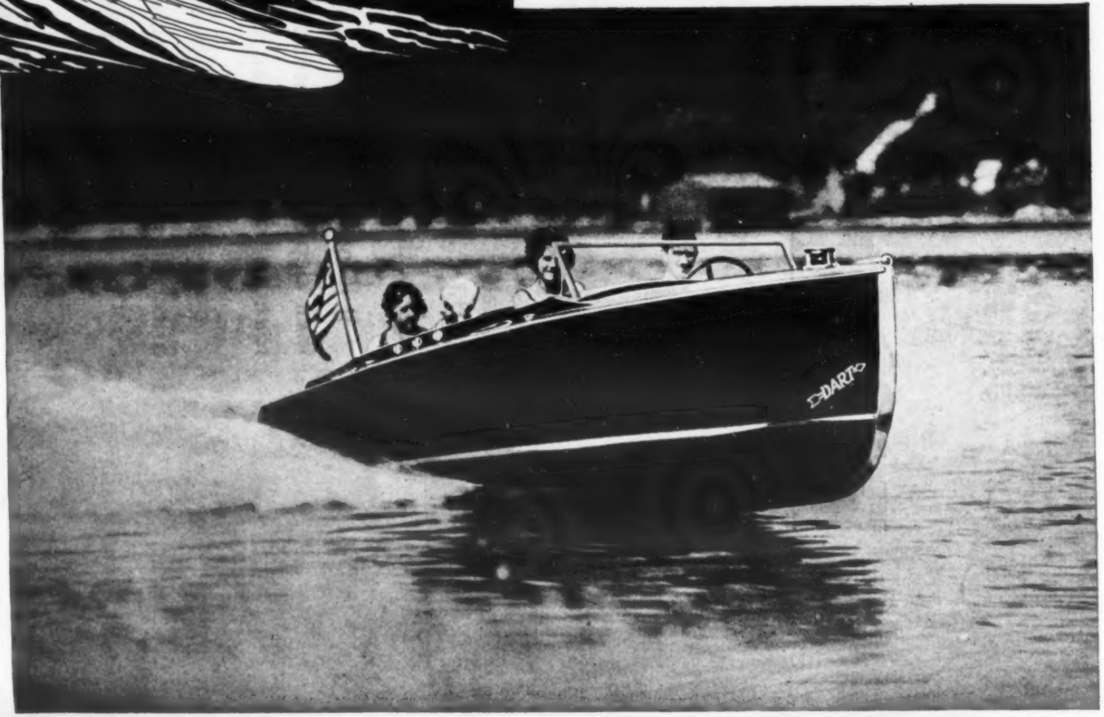


Speedboats ▲▲▲ and SURFBOARDS

From HAWAII we have learned something of Boat Construction



. . Their expert surf riders gliding smoothly down the slope of the wave have proven conclusively the importance of "balance".

Through scientific research and practical experimentation we have developed in Dart Boats a nicety of balance which allows a low prow and a level planing angle.

The result is greater stability, smoother riding and more speed per horsepower.

. . Four models, 30-foot, 26-foot, 22½-foot and the sensational new 18½-foot Runabout.

Write for interesting descriptive
. . portfolio of all four models . .

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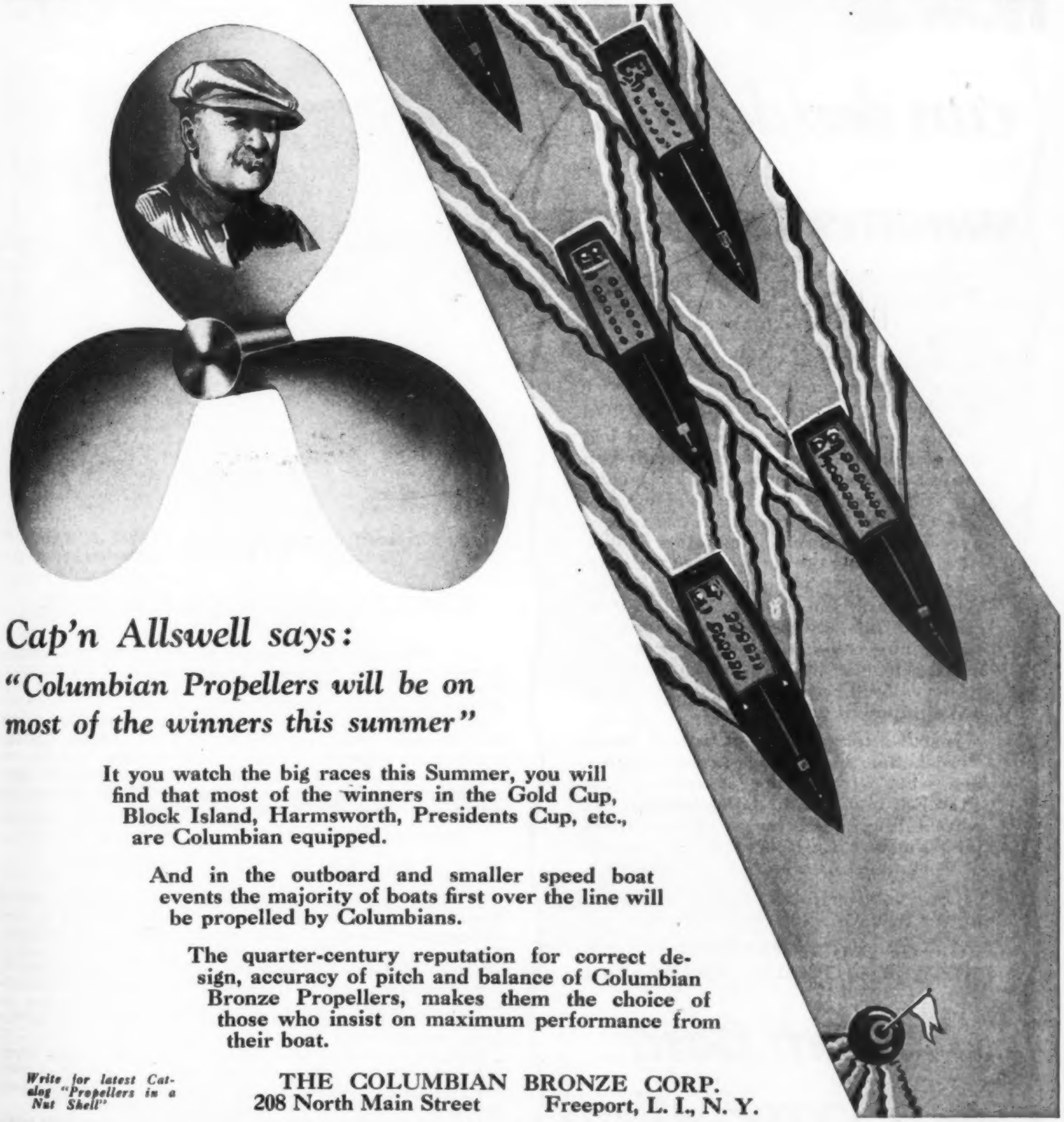


Cap'n Allswell says:

"Columbian Propellers will be on most of the winners this summer"

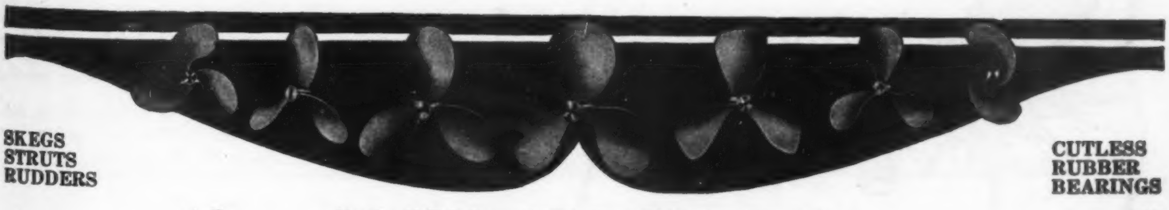
It you watch the big races this Summer, you will find that most of the winners in the Gold Cup, Block Island, Harmsworth, Presidents Cup, etc., are Columbian equipped.

And in the outboard and smaller speed boat events the majority of boats first over the line will be propelled by Columbians.

The quarter-century reputation for correct design, accuracy of pitch and balance of Columbian Bronze Propellers, makes them the choice of those who insist on maximum performance from their boat.

Write for latest Catalog "Propellers in a Nut Shell"

THE COLUMBIAN BRONZE CORP.
208 North Main Street Freeport, L. I., N. Y.



SKEGS
STRUTS
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CUTLESS
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BEARINGS

HOW 2¾ INCHES

can decide your

summer's success

SPARK PLUGS are never considered a big item—even on a small boat. In size they're perhaps not over 2¾" long. And yet... take it from Mr. Walter C. McDougall of Lake St. Catherine, Vt.... spark plugs can make or mar the summer of many a motor boatman. He writes:

"During the various regattas held last summer by the Adirondack Circuit you could hear the complaints and kicks coming thick and fast from the drivers and fully 75% of these ructions were caused by spark plug trouble. The writer had his troubles during the early part of the summer but when he changed to the Robert Bosch Spark Plug my troubles ceased. Can truthfully say that no other make of spark plug stood up the way yours did and it is needless to add that this year the Robert Bosch Spark Plugs will be standard equipment on my motor."

Install a complete set of Robert Bosch Pyro-Action Spark Plugs in *your* engine. See what a difference it makes ... in POWER, in speed, in dependability. See what a difference it makes when a spark plug is made to the Robert Bosch standards of workmanship, materials and design.

Have you the Robert Bosch Catalog for motor boats? Sent free on request.

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All Robert Bosch Pyro-Action Spark Plugs bear the full name "ROBERT BOSCH" and this trademark of Robert Bosch A.-G.

YARD AND SHOP

(*Continued from page* 110)

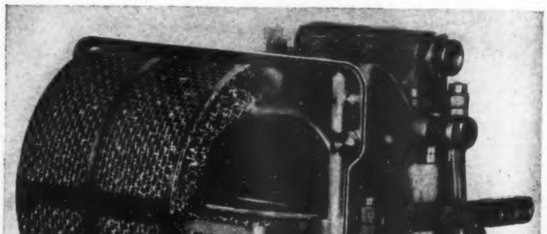
TRAPPING THE BACKFIRE

A new flame arrester for marine engines has been introduced by AC Spark Plug Company.

New features are its simplicity, compactness and freedom from restriction. It is made of brass to resist salt water corrosion.

The flame arrester completely arrests flames due to backfire, eliminating fire hazard from this source.

It has been adopted by several prominent marine engine builders as standard equipment on their duplex downdraft carburetors.



An improved flame arrester developed by the AC Spark Plug Company for downdraft carburetors

CHICAGO DISTRIBUTOR FOR STOCK CRUISERS

C. M. Isenhower, sales manager of the Matthews Company, Port Clinton, Ohio, announces the appointment of the Sampson Electric Company, 3201 Michigan Avenue, Chicago, as distributors of Matthews cruisers in that territory.

Mr. Sampson has become an ardent yachtsman himself and was attracted to the possibilities for such a franchise. Chicago is rapidly coming to the fore as a yachting center, and the tremendous impetus which the various harbor improvements have provided for boating removes the last obstacle in the way of shelter and storage for cruisers and runabouts.

ZANE GREY'S NEW FISHERMAN

The Red Wing Motor Company has just sold another pair of Red Wing engines for a new fishing boat being built in New Zealand for Zane Grey, noted author and deep sea fisherman. The new boat will be 46 feet overall and 12 feet 9 inches beam, of offshore cruiser type and especially designed for fishing swordfish, mako sharks, etc. The craft will be a heavy three-skin construction of full length Kauri and will be the last word in a deep sea fishing outfit. The boat will be named Frangipani after the Tahitian flower.

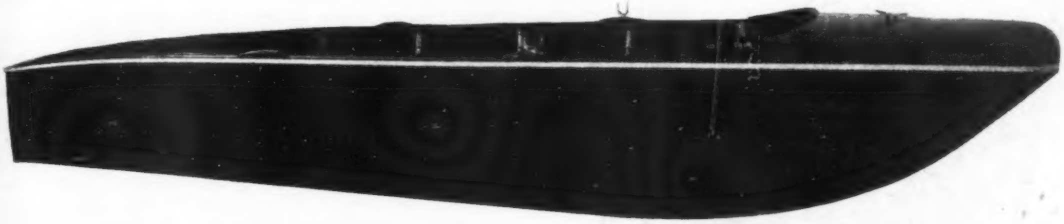
Builders of the boat are Collings & Bell, St. Marys Beach, Ponsonby, Auckland, New Zealand, who have completed many fine sportsmen's craft for New Zealand waters. The Zane Grey boat is to be completed by the middle of August.

The power plant for this new boat will be a true twin screw pair of Red Wing Thorobred marine engines, Model BB-Six 85-110 h.p., having bore of 4 1-2 inches, stroke 6 inches. These engines have powered many of the New Zealand fishing craft and were chosen by Mr. Grey for their fine reliability as well as splendid power and flexibility required of his boat when fighting record fish.

This makes the ninth Red Wing engine to be installed in fishing boats of Zane Grey, former boats still in use having been built on the Pacific Coast for use in the South Sea Islands and other parts of the world.

(*Continued on page* 124)

Top of the Class



This is Model 13 showing her lines out of water. This hull as shown, equipped with oars and oarlocks, sell for as little as $150.00

ONE day is much like another. Sea Sleds are built and sold week after week, and only here and there an odd man realizes how much genius of design and competent, honest effort goes into the building of them.

Then bang! comes a sudden jolt and all at once the labor of detail is lit up by a flare of joyous excitement.

Take Sunday, May 18th, the date of the second annual race around Staten Island. That's 36 long miles over six separate waterways—Arthur Kill, Kill Van Kull, Upper New York Bay, The Narrows, Lower Bay and Raritan Bay. Along that route you can find almost any kind of water from tide rip and ground swell to the wake of passing ocean liners.

In their own class of stock runabouts Sea Sleds finished first and second with the nearest competitor trailing 53 minutes behind. And of 21 outboards, racing over the same course in a class of their own, both Sea Sleds beat every racer but one, and that one broke the record for the course.

Considering that Sea Sleds are built for competence first, with speed as a secondary consideration, doesn't it strike you that's a tidy record to hang up against the world at large?

The first to finish was "the matchless unit," little Model 13 powered with a built-in Van Blerck Junior 35 H. P. motor. This has been generally considered the finest, most competent small runabout of the season—now she proves to be the fastest.

Model 20, a much heavier craft with a Universal Blue Jacket installed, finished within 2 minutes of the same time.

CORKER-I 08-599

This is Model 13, winner of the spectacular outboard 260 mile race from Boston to New York

This is Model 13, winner of the 36 mile race for runabouts around Staten Island this May

This is Model 13 on wheels packed up and ready to go fishing or racing or somewhere

For the Eye of the Dealer

Sea Sleds are now being built in ten stock sizes ranging from 13 feet over all up to 28 feet and with speeds of from 22 to 42 miles an hour and prices from $150.00 to $8500.00. Larger hulls are built to order all the way up to proven models capable of carrying fifty people at a speed of 40 miles an hour.

This complete line makes an ideal proposition for dealers and distributors. For the dealer it means that his entire stock can be bought from a single house, subject to the same terms. It means that everything on his floor will be of the same top quality bought under the same conditions. It means that special consideration will be shown to his orders, that shipments will be dependable and that special orders are always possible. In short it means the possibility of starting a profitable business in a moderate way which may easily grow to large proportions.

THE SEA SLED
CORPORATION
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SEA SLED
SPEED WITH COMFORT AND SAFETY

TRADE-MARK REG. **SEA SLED** U. S. PAT. OFFICE
PLANT AT WEST MYSTIC
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The Yachtsman's Annual Guide

Let Us Send You This Book!

The new Yachtsman's Guide is the only complete, up-to-the-minute yachting encyclopedia published. It contains 500 pages crowded with just the sort of practical information every motor-boat man wants. A copy of this invaluable volume should be aboard every boat and in the library of every yachtsman's home—on hand for immediate reference at all times. The following list gives you merely a partial glimpse of the wealth of material this book contains. Read it—think how it would help you!

All about engines—installation, ignition, vaporization and operation.
Hundreds of helpful hints on outfitting and overhauling.
More than 100 Motor Boatmen's Charts for the entire Atlantic Coast, Great Lakes and Canada.
Marine Laws—Rules of the Road at Sea.
What to do if the motor stops unexpectedly.
Times of high and low water and direction and velocity of tides in all ports.
Latitude and Longitude Tables, giving locations of over 1,000 points.
All kinds of marine codes, flags, etc.
Details of hundreds of cruise routes, description of ports and channels, marine signals, codes, flags, etc.
Characteristics of lights, buoys, fog signals, etc.
Numbering Law—How to obtain numbers for your boat.
What to do in a storm—to prevent collisions.
How to organize a yacht club—Constitutions and By-Laws and many other helpful features.

Send for Your Copy Today

"The Yachtsman's Guide" sells regularly for $1.50. Twelve issues of MoToR BoatinG would cost you $5.00 at single-copy prices. But by taking advantage of our special offer at once, you can have "The Yachtsman's Guide" and a whole year of MoToR BoatinG, for $3.50. (Two years' subscription including Yachtsman's Guide, $5.00.)

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"EDDIE"

An investigation conducted recently into the question of who Detroit's busiest men are has revealed, as might be expected, that one of the two who share these honors is the genial W. D. (Eddie) Edenburn, one of Detroit's most popular yachtsmen and a leading figure in the marine and automotive industries.

The list of offices which Eddie holds and the memberships in which he is active makes a grand total of twenty-two, including managerial capacities, vice-presidencies, chairmanships, directorates, editorships, secretarial offices and active memberships in a number of yacht and country clubs.

Eddie's is indeed a dynamic personality, a moving spirit in whatever he undertakes; always on the go, and injecting life and action into his work. His job is always to start things moving and then to keep the wheels turning. Despite the multiplicity of his lines of action, he never seems to be lacking more than sufficient energy to carry them all through, speedily and efficiently. Action is the one quality that best sums up his personality, just as the unlit cigar in his mouth is characteristic of him—the chances are he never has time to light it. The popular rumor is that Eddie only smokes when he isn't busy (about once in six years).

Eddie's career has been a checkered one, with his principal efforts directed along the lines of automobile and motor boat interests. His first job was with the Indianapolis Star, then the Sun, and then the News. Getting away from newspaper work, he ran successfully through a string of automotive positions, generally in the capacity of advertising manager, and then came to Detroit in 1914. On The News, he specialized in sports and automobile work, and then became interested in motor boat racing.

"Eddie" Edenburn, with the inevitable cigar

Since 1923 he has been chairman of the Regatta Committee of the Gold Cup Races and has run the automobile races at Indianapolis on Memorial Day since 1915. His job as Regional Director of the Contest Board of the American Automobile Association requires him to officiate at many races, straighten out knotty problems and settle all kinds of grievances. Disastrous to any other type of disposition, Eddie seems to thrive on that sort of thing and enjoys it hugely.

Here is a list of Eddie's activities:

1. Manager of the Michigan Automotive Trade Association.
2. Regional Director of the Contest Board of the American Automobile Association.
3. Vice-President of the International Conference of State and Provincial Automotive Trade Association Managers.
4. Manager of the Detroit Auto Dealers' Association.
5. Chairman of the Detroit Gold Cup Committee, Inc.

(*Continued on page* 122)

EMPIRE

PENN DRAKE MARINE OIL

Rides with WINNERS

because winners
ride with
Penn Drake Oil

IT is not coincidence that ties up the name of Empire Penn Drake Oil with the names of consistent winners and holders of world's records.

It is due first to the fact that Empire Penn Drake Oil is especially refined for marine use, and second to the fact that this is recognized by the men who are keen enough to win races.

Easier starting at low temperature . . . that's a feature. Another feature . . . it holds its body under extreme heat and heavy loads. Three grades but only one standard . . . the finest.

Don't forget that EMPIRE PENN DRAKE OIL holds the record for LOWEST LUBRICATION COST PER MILE . . . and that *is* a record.

Guaranteed
100% PURE
PENNSYLVANIA
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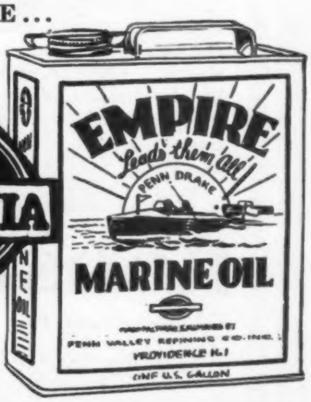
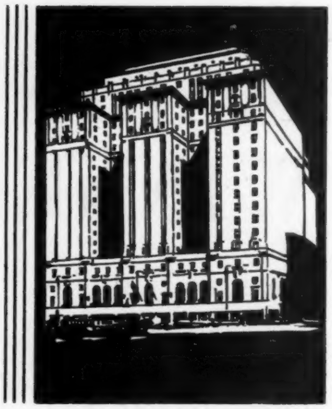


Outstanding Records with
Empire Penn—Drake Oil and Whirlwind Spirits
WORCESTER, MASS., MAY 29-31
Class F, Division 3—Ross Maddocks, 47.876 M.P.H.—World's Record.
Class D, Division 3—Ross Maddocks, 45.973 M.P.H.—World's Record.
Classes D and F, Division 2—Robert Warner, First.
WESTERLY, R. I., MAY 30
Six Firsts and Three Seconds with Empire
YAWGOOG, R. I., JUNE 1
Four Firsts and Two Seconds with Empire

PENN. VALLEY REFINING CO., Inc.

BOSTON WORCESTER MIDDLETOWN
312 BROAD STREET, PROVIDENCE, R. I.
REFINERIES: TITUSVILLE AND KARNS CITY, PA.



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When you make the Roosevelt your home, you are in the center of the Grand Central Zone, with its towering sky scrapers, and the world's most famous stores and smartest specialty shops. The Great White Way, a few blocks distant, offers the latest amusement attractions. See special offer below.*

The ROOSEVELT

Edward Clinton Fogg, Managing Director

Madison Avenue and 45th Street
New York City

***Before you visit New York, write The Roosevelt for this free amusement guide.**

Gotham Life, published each week, gives the latest facts about theatrical attractions, movies, churches, lectures, museums, sports and other current attractions. Tell when you plan to visit New York and we will send you the copy issued nearest that date with our compliments. Rate folder on request.

"EDDIE"

(*Continued from page* 120)

6. Member of the Board of Directors of the Yachtsmen's Association of America.
7. Secretary of the Marine Industries Association.
8. Editor of the Main Sheet.
9. Chairman of the Race Committee of the Yachtsmen's Association of America.
10. Secretary of the American Power Boat Association.
11. Secretary of the D.A.D.A. Service Men's Association.
12. Director of the Union League Club of Michigan.
13. Member of the International Yacht and Country Club, Canada.
14. Member of the Colonial Yacht Club, of New York.
15. Member of the Gowanie Golf and Country Club.
16. Member of the Pontchartrain Club.
17. Member of the Regatta Circuit Riders' Club.
18. Member of the Detroit Yacht Club.
19. Member of the Detroit Automobile Club.
20. Member of the Detroit Outboard Association.
21. Director of the Michigan Pikes Association.
22. Mason.

SEA-GOING RADIO SETS

One of the latest achievements of the American Bosch Magneto Corporation of Springfield, Massachusetts, was the development of a practical and compact radio set designed for installation in the motor car. This set was extremely simple in construction and installation, yet was scientifically engineered to meet the special requirements demanded by an installation of this sort. Its use rapidly proved the set to be thoroughly practical and satisfactory in operation and brought to the motor car the same enjoyment of radio possible in the home.

Now comes the announcement by the Bosch Company of another compact set designed for a specialized field—for use in small motor boats and cruisers. All the difficulties which have proved obstacles to satisfactory operation of the radio aboard boats in the past, such as the annoyance caused by the motor's electrical ignition set, have been entirely eliminated in the new Bosch boat radio. The materials used in its construction and its design make it impervious to the effects of moisture and salt air and adequate shielding prevents any possibility of interference from the motor and other outside sources.

THE BLOCK ISLAND ANNIVERSARY

This year will see the twenty-fifth annual race of the New York Athletic Club Yachting Department to Block Island. Started way back in 1904, it enjoys the repute of being one of the oldest fixtures of its kind in the yachting world. This race was originated by Commander H. A. Jackson with his good friend and shipmate R. W. Rathborne following a discussion of the possibilities during a cruise in the fall of 1903. As originally decided the course extended from Huckleberry Island to Block Island and covered a distance of one hundred nautical miles. Fundamentally the rules covering the sailing classes have remained unchanged in all these years with the exception of some additions to suit the changes in types of boats as they exist today. Seven boats started in the first race and it was won by the sloop Possum of the Sachems Head Yacht Club. Successive races each year have seen a greater or lesser number of boats taking part with thirty-three taking part in 1907 which has been the greatest number of starters in any year since.

In 1908 motor boats began to appear in sufficient numbers to make it worth the effort to add a class for these, and skipper Thomas Fleming Day donated the trophy for this race. It was won by the well known cruiser of those times, Eronel, owned by S. Cochrane. The race has been run continuously since then with the exception of the years 1917 and 1918 when the country was at war.

The course followed down Long Island Sound, through either Plum Gut or the Race into Block Island and to the West Harbor of Block Island presents no difficulties to the present day yachtsmen. Fog is sometimes encountered but this only adds to the interest and tests the navigational skill of the amateur skipper. This year's race on July 12 will again be open to cruisers and fast cruisers as defined by the A. P. B. A. Rules and circulars giving the conditions of the race can be obtained from the Chairman of the Regatta Committee, F. W. Horenburger, 959 Eighth Avenue, New York City. It is not too early to begin preparations for such a race and the Race Committee will be glad to assist any skippers who plan to take part.

2 BUDA SIXES

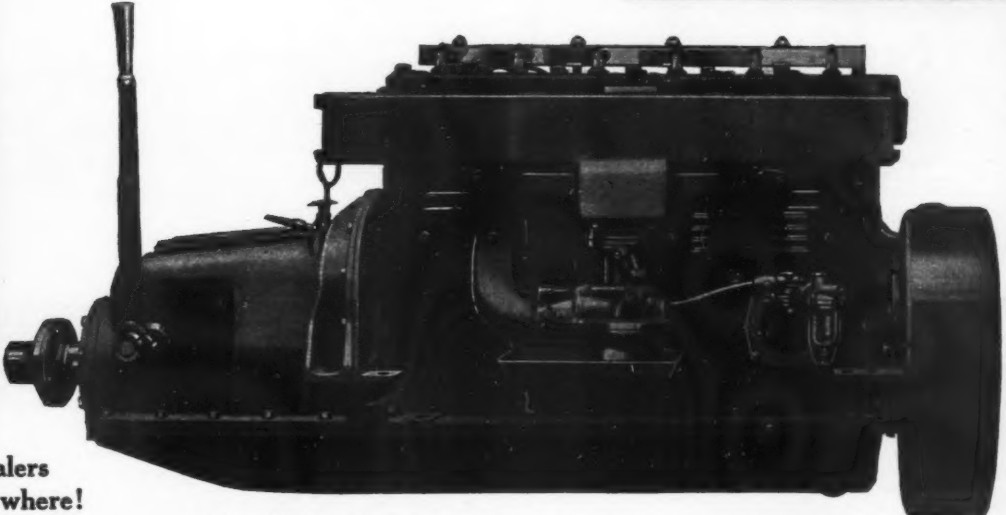
FULLY · EQUIPPED

$745.

F.O.B. FACTORY

$775.

F.O.B. FACTORY



Dealers Everywhere!

The BUDA Line

6 cylinders—with or without reduction gear:

BM-386	**GM-572**
80 H.P.	110 H.P.
BM-411	**GM-638**
85 H.P.	126 H.P.

6 cylinders—"Hivelo" models, without reduction gear:

HM-260	**HM-298**
75 H.P.	85 H.P.

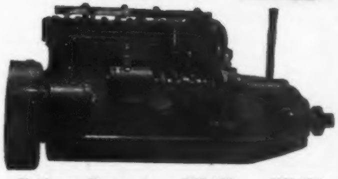
In these Buda 6-cylinder marine "Hivelo" engines you have a 3-inch crankshaft and 7 main bearings. You have carburetor drip pan, backfire protector, oil sump pump, gasoline filter and fuel pump. The price includes control panel with indirect lighting.

Buda marine "Hivelo" engines develop their maximum horsepower at 3000 R.P.M. as follows:

Model HM-260—75 H.P. Model HM-298—85 H.P.

Model HM-260, 3½ x 4½, 260 cu. in. piston displacement at $745.00, fully equipped, f.o.b. factory.

Model HM-298, 3¾ x 4½, 298 cu. in. piston displacement at $775.00, fully equipped, f. o. b. factory.



Maximum Power at 3000 R.P.M.	HM-260	HM-298
	75 H.P.	85 H.P.

Write today for bulletin and full particulars.

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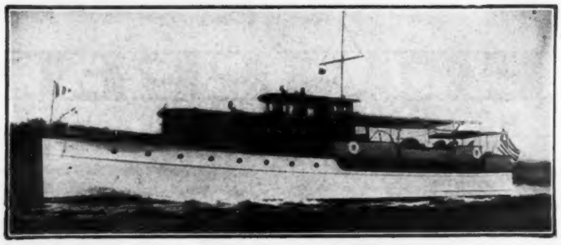
THE BUDA COMPANY, HARVEY, { CHICAGO SUBURB } ILLINOIS
ESTABLISHED 1881

BUDA
MARINE
POWER



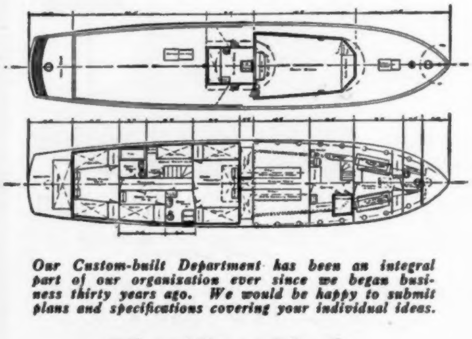
A Perfect Boat for a Perfect Summer

Our new 77-foot Cruiser, originally built according to the owner's individual plans and specifications—but now *standardized by popular demand*—is one of the handsomest and most generally satisfactory boats ever built; in fact, in every way it completely fulfills your ideas of a perfect boat. Staunch, steady and reliable, beautiful in line, with an unusual amount of deck space, luxuriously finished and appointed, this amazing Cruiser is the sensation of the year.

Complete details, exterior and interior views, specifications, etc., will be sent upon request. But we urge you to take an afternoon off and visit our Shipyard, where you can examine this Cruiser at your leisure and get a first-hand idea as to exactly how it performs in the water.

SPECIFICATIONS

16-foot Beam
Double-planked Hull
Decks of Teak
Houses of Mahogany
Two Double Staterooms
Two Single Staterooms
Two Bathrooms
Combination Dining and Living Room
Large Deck House
Captain's Stateroom adjoining Pilot House
Galley running full width of boat
Quarters forward for Crew of Four
Frigidaire Ice Machine
Decatur Pressure Water System
110-volt Electric Generator
Bilge Pump
Electric Windlass
15-foot Tender
12-foot Dinghy
Unusual Appointments and Refinements
Powered with either Gasoline or Diesel Motor



Our Custom-built Department has been an integral part of our organization ever since we began business thirty years ago. We would be happy to submit plans and specifications covering your individual ideas.

The New York
Yacht, Launch & Engine Co.
Morris Heights, New York City
Phone: SEDgwick 4880

YARD AND SHOP

(*Continued from page* 118)

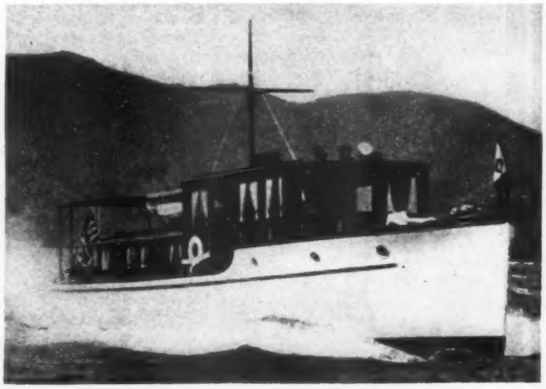
A POPULAR LUBRICANT

Numerous testimonials received by the Enterprise Oil Company, Buffalo, N. Y., express the complete satisfaction of the many manufacturers who have specified and recommended the use of Duplex Marine Engine Oil in their products.

The Dwight Lumber Company of Detroit, Michigan who manufacture high-grade mahogany runabouts, state that they feel Duplex Oil has done much to improve marine engine operation. Accordingly every Dee Wite boat leaving their works carries a can of Duplex as initial equipment and an instruction plate is also placed in a conspicuous place recommending the continued use of that oil.

Dee Wite boats are built to give maximum power and speed as well as long life. Naturally the maintenance of that speed is dependent entirely upon engine efficiency and it has been Dee Wite's experience that Duplex is most successful in giving that efficiency. They want every owner to be entirely satisfied with performance and operation, and state that that is their reason for recommending Duplex.

After two years of exhaustive tests with Duplex Oil, the Kermath Manufacturing Co., has also adopted this brand of oil as the recommended lubricant for all of their motors. This prominent manufacturer endorses Duplex without reservation as ideally suited to marine requirements.



The Stephens 43, distributed by the American Boat Corporation, carries a pair of matched Gray eights. They develop 260 h.p. and produce 18 m.p.h

A. TOWNSEND YARD

A. Townsend Yard died at his home, 11 Sterling Road, Harrison, New York, on Sunday, May 25, 1930, after a short illness. He is survived by his widow, Mrs. Dorothy G. Yard, and two daughters, Dorothy G. Yard and Cynthia Yard.

The funeral took place on Tuesday, May 27, 1930, and he was buried at Trenton, N. J., the home of his parents. Mr. Yard was born at Trenton, N. J., on September 27, 1888. He had a wide experience in industrial and plant management and was associated at sometime with the Roebling Company of Trenton and the Worthington Pump and Machine Company.

In April, 1926 he became associated with Edward Smith & Co., paint and varnish manufacturers at Long Island City, N. Y. At the time of his death he was vice-president, treasurer, general manager and director of this company.

Mr. Yard's death is not only a great shock to his large circle of friends, but a distinct loss to the company with which he was connected. He was a man of quiet personality, high ideals and great ability. He combined a wide knowledge of industrial manufacturing with the ability to carry out his ideas in actual practice. Those who were privileged to be associated with him in business quickly became his close personal friends and will join the members of his family in mourning his loss.

MAYBE WINS SIX-METER RACE

At San Francisco on May 18 the perpetual challenge trophy race was sailed in San Francisco Bay and won by the six-meter yacht Maybe, sailed by Commodore Rousseau of the Corinthean Yacht Club of Belvedere. Second place was won by Thomas Lee's Caprice of Los Angeles.

(*Continued on page* 126)

A COMPLETE INBOARD MOTORBOAT

For All the Family

at $1095—

With Self-Starter, Wheel Steering, Safety Glass and Automobile Comfort.

NEW SPEED—28 MILES PER HOUR
SAFETY LENGTH—FULL 17 FEET
MORE MILES TO THE GALLON

Would you like to own a new, fast, completely-equipped inboard motorboat that all the family can drive this summer? With all the style and good looks of a big $3,000 runabout? And faster, probably, than anything of its size or class in your neighborhood? Strong, safe and seaworthy, and economical . . .

That's what the new Dunphy Flying Dutchman is—the achievement of 64 years of boatbuilding, and more honest value for your money than you could ever buy before. Follow us carefully while we give you a few facts about this remarkable boat, and see if anything ever equalled it: (1) Double framework on bottom, all strong white oak. (2) African mahogany planking throughout. (3) All copper and brass fastened. (4) Custom-built beauty—long life. (5) Expensive, durable upholstery. (6) Automatic self-baler. (7) 2" extra width in front cockpit. (8) Extra room around motor. (9) Unusually wide stern—better riding qualities. (10) 28 m. p. h. (11) More miles to the gallon. (12) Shatter-proof glass windshield. (13) Dependable safety—length 17ft. (14) Plenty of room (beam 5'2") for five. (15) Complete radio as extra equipment. *Your order can be filled immediately.*

Driving the Flying Dutchman is an entirely new sensation. You get all the comfort and substantial feeling of a big $3,000 runabout. It *feels* safe and it is safe. And its unusual speed is a new delight you can't appreciate till you've stepped on the starter. Orders can be filled at once.

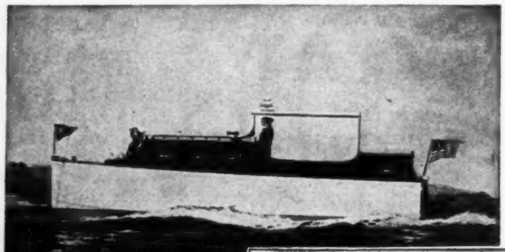
What Are Your Boat Problems?
64 Years Experience Qualifies Us To Help You—
Send for Free 1930 Catalog

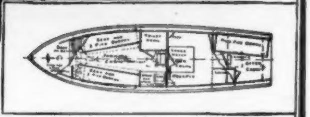
Write to us today. Tell us what you need. We'll tell you what boat and equipment to use. 64 years' building of all types of boats and motorboats qualifies our Personal Service to give you good reliable advice. Address Dept. JMB. Dealers: Write!

Safety DUNPHY

BOAT MANUFACTURING COMPANY, Eau Claire, Wisconsin
***In Canada:* Paul Paquet, 50 Maple Avenue, Quebec**

Sleeping quarters for five in the 28-Foot Cruiser





Only $2475
with operating equipment

"SCALLOP"

Powered with new

Model "A" Ford Motor

Smart, substantial, comfortable—but no frills! That's how this practical cruiser, equipped with the latest Model "A" Ford Motor with Barker Marine Conversion, can be sold at such a remarkably low price.

The Scallop develops 35 actual horsepower at 1600 revolutions—its most economical speed. It consumes only 1½ gal. per hour, and oil consumption is negligible. Normal cruising speed of more than 11 miles per hour.

Constructed of the best materials with expert workmanship. Full headroom in the main cabin. Everything essential to comfort has been included.

The Scallop, developed by an experienced cruising man, is the ideal boat for the man of moderate means.

Further details from

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NAVAL ARCHITECTS
Telephone VANderbilt 10167
YACHT BROKERS

Cable Address—MILBRECH

New York Representatives of

Noyes Marine Co., 305 Congress Street, Boston, Mass.

YARD AND SHOP

(*Continued from page* 124)

THE FLORIDA EAST COAST CANAL

Items appearing in newspapers recently indicate that there is some misconception as to what work has been authorized and is contemplated in the near future on the East Coast Canal from the St. Johns River to Miami. It is therefore deemed desirable to indicate the present status of the work and also the plans for the future.

The East Coast Canal having been acquired by local interests and transferred to the United States, the Chief of Engineers has authorized maintenance work to restore the old canal to a depth of five to six feet, which will provide a usable channel pending the construction of the Intracoastal Waterway to its full dimensions. He has also authorized the dredging to full project dimensions, i. e., 8 feet deep at mean low water and 75 feet deep bottom width of the Indian River Section of the Intracoastal Waterway from St. Lucie Inlet north to the Haulover, where the channel is in open water and no right of way is required. Recommendation has been made to increase the bottom width of the waterway to 100 feet, but before becoming effective this recommendation must be approved by Congress.

The present status of the work is as follows:

Restoration of old canal..—One government hydraulic dredge is at work on the canal from the St. Johns River moving south.

One government derrick boat is removing logs and snags from the canal near Oak landing between the St. Johns River and St. Augustine.

One leased hydraulic dredge is at work near the Palm Valley bridge.

Two additional leased dredges of the hydraulic type have been accepted and will be at work on the canal near Matanzas Inlet and in the upper reaches of the Halifax River in a few days.

Bids have been received for one derrick boat for lease for the purpose of removing snags ahead of the dredges.

Bids have been invited for two hydraulic dredges for the work of removing shoals in the section of the East Coast Canal between Jupiter and Lake Worth. These will be put on the work as soon as bids are received, plant inspected and accepted, and suitable areas provided for the deposit of spoil.

The work will be extended as rapidly as possible to the section between Lake Worth and Biscayne Bay. Due to the diverse character of the material to be dredged and the state of development of the lands adjoining the canal in this section, the problem of dredging and securing suitable spoil areas is more complicated and requires more time for preliminary work than in other sections. However, it is planned to put dredges on this section of the canal as soon as the details can be worked out. Incidentally this will depend largely upon the activities of local interests.

Surveys are in progress on the Indian River Section of the Intracoastal Waterway to determine quantities for letting a contract. Field work on the section from St. Lucie Inlet to the vicinity of Melbourne is appraoching completion and as soon as quantities are computed and specifications completed, bids will be invited for doing the work by contract.

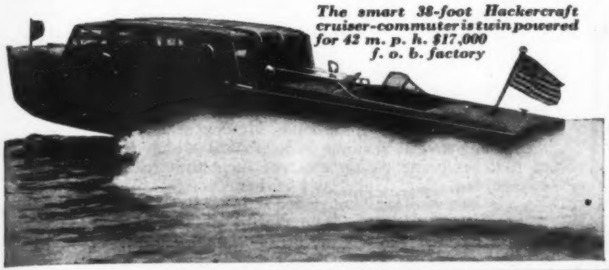
The survey will be continued north to the Haulover and bids for a separate contract will be invited for the north portion of the Indian River Section as soon as the necessary data are available and specifications completed.

The law adopting this project for the Intracoastal Waterway stipulated, among other things, that local interests should provide, free of cost to the United States, the necessary right of way for the canal and also provide the necessary spoil areas for the deposit of material excavated from the canal during its construction and maintenance. The officials of the Florida Inland Navigation District are now actively engaged in the fulfillment of these conditions. Their work and consequently the work now in progress on the canal by the United States and that contemplated in the future will be greatly facilitated if the owners of the land along the canal, who will benefit by its construction, will cooperate fully with the Navigation District officials in their efforts to meet the conditions imposed by law.

FOR THE LIBRARY

Yachtsmen who may wish to know more of the life and activities of one who played an active part in the early charting of the various seas, will undoubtedly be interested in a new volume recently published by Garrett & Massie of Richmond, Virginia. It is entitled, "The Pathfinder of the Seas," the life of Matthew Fontaine Maury, and is a complete biography by an outstanding Virginia author and historian with an introduction by Dr. G. W. Showalter, author and associate editor of the National Geographic Magazine.

(*Continued on page* 128)



The smart 38-foot Hackercraft cruiser-commuter is twin powered for 42 m. p. h. $17,000 f. o. b. factory

An ELEVENTH HOUR DECISION YOU'LL NEVER REGRET · · · ·

The 26-foot 10-passenger Hackercraft is famed alike in Europe and the United States for its doughty performance and championship speeds—$4475 f. o. b. factory

This is the Hackercraft "30," a magnificent runabout which provides a most luxurious interpretation to fine boat ownership. Speeds up to 42 m. p. h.—$5500 f. o. b. factory

A singular degree of staunchness and speed qualifies the 24-foot Hackercraft. Its responsiveness, safety and alertness are available at—$3150 f. o. b. factory

LET one of these handsome Hackercraft hulls snap you from the dog days of a hot summer into the cool invigorating pleasures that await you afloat. As you reel off the miles of lakeshore or coast line you'll feel sorry for your friends—unless they've been gathered under your wing to share the fruits of your happy choice . . . Hackercraft are upholstered throughout in genuine leather over Marshall double springs with luxurious riding room for ten or more. Certainty of performance and absolute safety coupled with speeds up to 50 miles per hour make every Hackercraft trip a joyous one . . . Bronzed by wind and sun, with the cobwebs blown away for good and all, you'll wonder why this new-found freedom ever proved so elusive. Hackercraft are built from genuine Honduras mahogany—are beautifully appointed—fitted with chrome nickel bright work, and are powered with reliable, trustworthy marine engines. Hackercraft are modern as the moment—are built to a quality standard—cost a very little more—but will well repay your faith in a fine product.

HACKER BOAT COMPANY
530 River Drive Mt. Clemens, Mich.

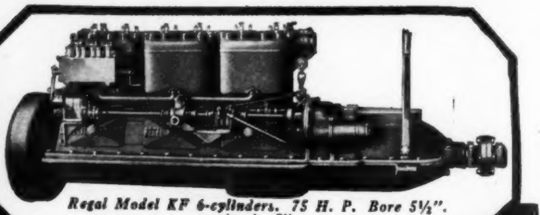
For demonstrations, catalog, complete details—and immediate deliveries—write or wire the factory, or

See Your Hackercraft Dealer Today

New York City—5th Avenue at 15th Street; Boston—1043 Commonwealth Avenue; Chicago—Motor Boat Mart, Navy Pier; Detroit—7433 East Jefferson Avenue; San Francisco—102 New Montgomery Street; Los Angeles—3202 McClintock

HACKERCRAFT

AMERICA'S FASTEST SPEED BOATS



Regal Model KF 6-cylinders. 75 H. P. Bore 5½". Stroke 7"

POWER *Plus* LONG LIFE

Regal Engines are built to outlast your boat. Conservative horsepower ratings and generous bore and stroke guarantee an extra margin of power for emergencies.

REGAL MARINE ENGINES

18 Models—1 to 6 Cylinders—2 to 75 H. P.

The Regal line of 18 models includes a size exactly suited to your hull. Rugged and compact in construction, they are built to give you the utmost in smooth, flexible and dependable performance at a minimum cost per mile. High speed reversing gears, silent chain-drive timing gears and gear oil pump lubrication are but a few of the structural refinements.

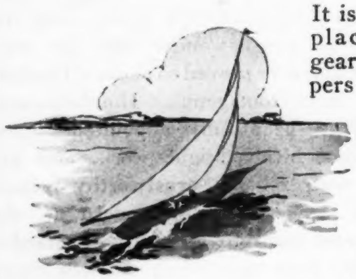
Write today for engine catalog and details of the Regalite ¾ K.W. Air-Cooled Electric Lighting Plants.

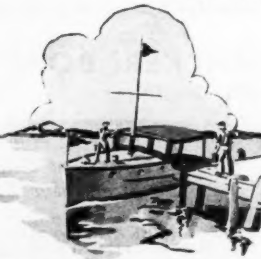
REGAL GASOLINE ENGINE COMPANY
Established 1901
74-82 WEST PEARL ST.
COLDWATER, MICHIGAN

REGAL

When the Race is On . . .

It is too late to replace defective gear. Then skippers appreciate their Tiebout Hardware and Fittings, made to withstand more than the usual buffeting of wind and weather.





For whatever replacements which may be required during the season, consult with your boat yard or dealer the latest edition of the Tiebout Catalog. In it you will find hardware and equipment for every type of craft, at lowest prices consistent wih Tiebout standards of quality.

W. & J. TIEBOUT
NEW YORK
118 CHAMBERS ST.

YARD AND SHOP

(*Continued from page* 126)

SEVEN SEAS SAILS SEAWARD

Inglis Uppercu's ship-rigged, three-masted 150-foot yacht Seven Seas set sail recently for Cuba and Porto Rico, the first scheduled stop being Havana. Seven Seas was formerly a Swedish training ship aboard which the Naval Cadets of that seafaring nation received their first training in the ways of the sea. Mr. Uppercu had her brought to Newport News, Va., where she was converted into a beautiful yacht with the most modern fittings obtainable added and an auxiliary engine installed. Last month she was brought up the coast to New York for the installation of some additional equipment. While here, a specially constructed Banfield 22-foot Sea Skiff Yacht Tender powered with a Gray 6-cylinder, 72-h.p. motor was slung in her davits.

The present West Indian Cruise is to be relatively short, but is to be followed by a full year's voyage into the far corners of the world. Seven Seas has been designated as the Flagship of the Red Bank Yacht Club for the year 1930. Mr. Uppercu, a summer resident of Rumson, New Jersey, was one of the founders of the Red Bank Yacht Club and is General Chairman of the Twenty-eighth Gold Cup Regatta being held at Red Bank, New Jersey, under date of August 16 and 17.

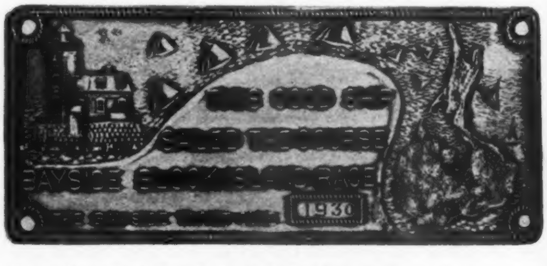
THE BLOCK ISLAND RACE

The Regatta Committee of the Bayside Yacht Club has added an interesting feature to the Bayside-Block Island Auxiliary Handicap, which has been the annual racing classic for auxiliaries for the past nine years. The details of this race, which is limited to cruising sailboats with auxiliary power, both of which may be used, are well known to our readers. More than 30 entries for the 1930 race, which will be sailed on August 1, had already been received before the formal announcement of the race was mailed.

To every yacht which finishes this race there will be presented a sterling silver plaque 4⅛ by 1⅞ inches, bearing these words:

> This good ship sailed the course.
> Bayside Block Island Race, 1930.

The plaque is handsomely designed in embossed sterling silver, showing on the left Stepping Stones Light House, which is the start of the race, and on the right a bas-relief of Block Island with yachts covering the course. This is suitable to be screwed on a bulkhead or other place commemorating the event.



The plaque which will be presented to every contestant that finishes the Bayside-Block Island race

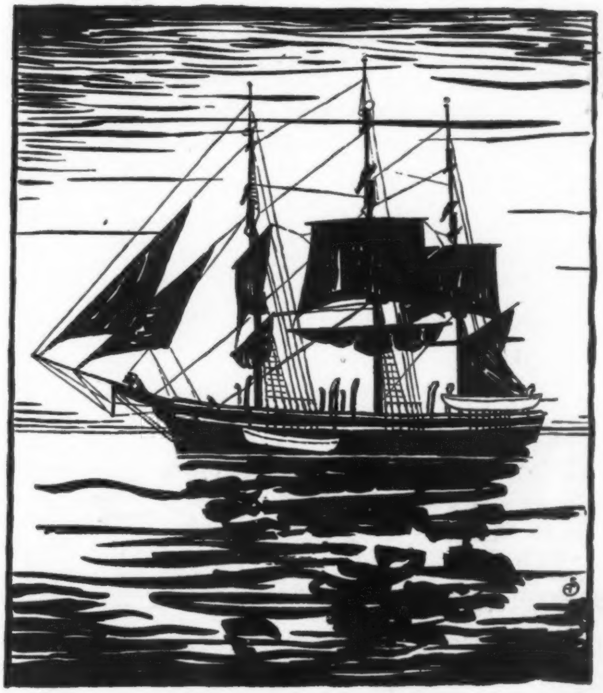
RED BANK Y. C. MAKES BOND ISSUE

At a meeting of the Red Bank Yacht Club at the Red Bank Borough Hall a bond issue of $50,000 was authorized. Vice Commodore Thomas S. Field, Jr., presided in the absence of Commodore Gerald C. Holbrook who was in Bermuda. Letters have already been mailed to all members of the club offering them an opportunity to participate in the purchase of this issue. Of the $50,000 issue but $40,000 will be sold at the present time, $25,000 of which is for the payment in full for the Kennedy property on East Front Street, Red Bank, which was recently acquired by the club. The remaining $15,000 will be used in renovating and furnishing the house now on the property and converting it into a modern club house with card rooms, pool rooms, ball room, grill, guest rooms, etc. A bulkhead will be built and a dock will be erected to extend some 200 feet into the river at the end of which will be placed the floating clubhouse which has been anchored in the river for over thirty years.

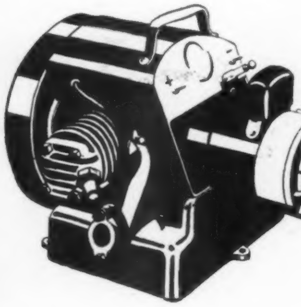
Clarence A. Legg, secretary of the club is chairman of the Finance and Building Committee and Treasurer Carl C. Schwenker is chairman of the Housing Committee.

(*Continued on page* 130)

BRANFORD MIDGET LIGHTING PLANT



Less than a hundred years ago whalers were bringing into American ports the sperm oil that was then used for lighting purposes. . . . Hardly less primitive are the kerosene lamps to be found on many small cruising yachts today. . . . Power boats and auxiliaries find the engine generator unable to keep the battery sufficiently charged, and the engines of many work boats turn over too slowly to drive any generator. . . .The Branford Midget Lighting plant is designed to supply boats such as these with inexpensive and completely modern lighting. . . .The plant occupies a space twelve inches by eighteen inches, by twelve inches high, and weighs less than fifty pounds. . . . Six or twelve volt generators are to be had, and where a starting battery is available, no other is needed. . . . The price of the six volt plant complete and ready for use is 140 dollars, for the twelve volt plant, 5 dollars more. . . .



MALLEABLE IRON FITTINGS CO.

BRANFORD CONNECTICUT

what a buy!
$60 SAFETY SUIT
Now→$15.

The Handiest to Use
Stow Away and Carry
Makes Boating a Pleasure

The Safety Suit can be put on in 29 seconds, slip into it just as you would into a union suit. Put the elastic collar over your head, turn locking levers sealing the suit and you are ready to undergo the most rigorous sea conditions. The Safety Suit is compact and easy to handle. When not in use takes little space.

Comes in various sizes. In ordering give approximate weight and height. Mail orders promptly filled.

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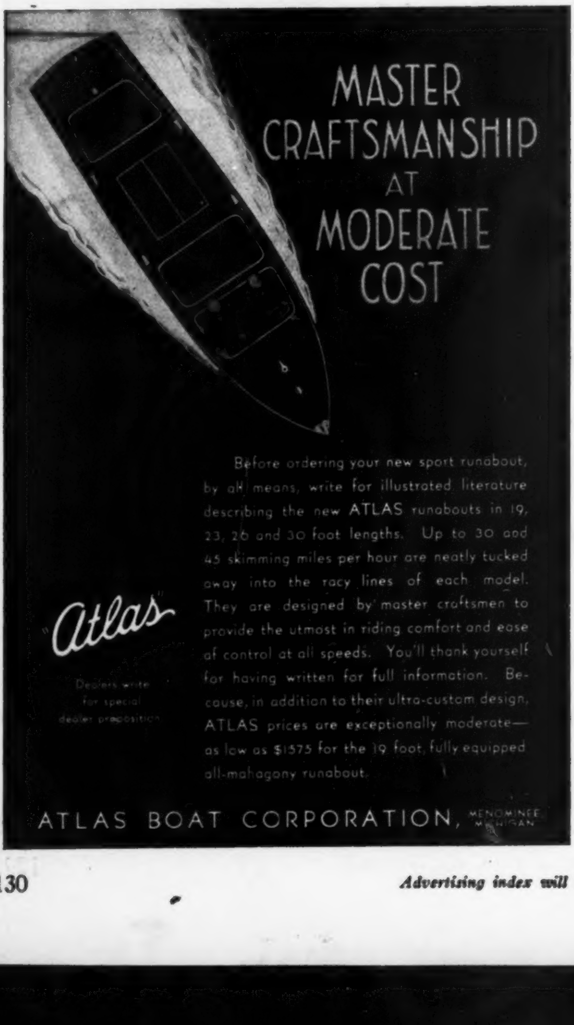
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Before ordering your new sport runabout, by all means, write for illustrated literature describing the new ATLAS runabouts in 19, 23, 26 and 30 foot lengths. Up to 30 and 45 skimming miles per hour are neatly tucked away into the racy lines of each model. They are designed by master craftsmen to provide the utmost in riding comfort and ease of control at all speeds. You'll thank yourself for having written for full information. Because, in addition to their ultra-custom design, ATLAS prices are exceptionally moderate—as low as $1575 for the 19 foot, fully equipped all-mahogany runabout.

"Atlas"

Dealers write for special dealer proposition

ATLAS BOAT CORPORATION, MENOMINEE, MICHIGAN

YARD AND SHOP

(*Continued from page* 128)

CORINTHIAN FLAGSHIP LAUNCHED

Not long ago at Wilmington, Delaware, there slid down the ways of the Marine Construction Company a palatial new 75-foot cruising yacht, owned by Ernest Dupont, Commodore of the Corinthian Yacht Club of Philadelphia, which automatically makes it the flagship of their fleet.

The Marine Construction Company might well be proud of the job they have done in the construction of this smart cruiser, which has been christened Edris. She incorporates in her design and construction all of the latest and most approved principles of the naval architectural art and represents one of the most complete small ships ever launched. All her appointments are of the most modern obtainable and no detail of equipment has been omitted which might contribute toward making her a most successful yacht.

Edris is 75 feet in overall length on a 74-foot waterline, with plumb bow and conventional cruiser-type transom stern. Designed with a graceful sheer, the raised deck is carried aft to a point about amidships with the pilot house raised above its after end. The passageways on either side as well as the cockpit astern are protected by a full length canopy which streamlines gracefully into the rest of the superstructure. Edris' beam is 17½ feet with a draft of 4 feet 9 inches. Her construction represents the ultimate in staunch building, having a strong white oak keel and frames of similar material to which her double planking is secured with galvanized fastenings. This 1½-inch planking is made up of two courses, the inner of Oregon pine and the outer of Philippine mahogany. Canvas is laid in marine glue between the two courses, binding them together and insuring permanent watertightness. Decks are of selected teak, laid on white oak deck beams and all of her exterior joiner work and trim is of selected teak of substantial size and sturdy construction, while deck hardware is of chromium plated brass.

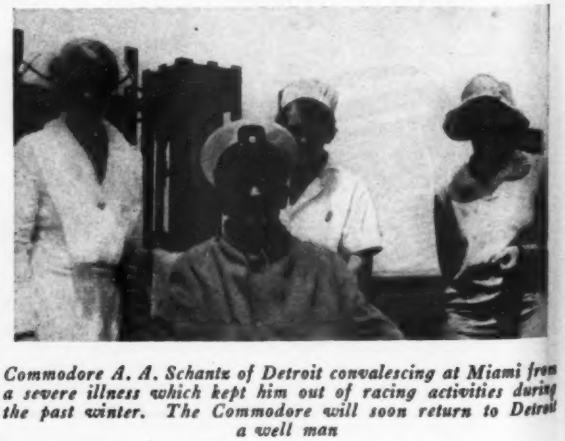
The spacious deckhouse measures 12 by 18 feet and is located amidships immediately aft of the wheelhouse. Heavy plate glass windows, which can be lowered in pleasant weather, make available a comfortable living room on deck. Comfortable quarters for a crew of four have been provided, with the captain's individual stateroom located in the wheelhouse. Aft of the crew's quarters is a well equipped galley with special attention paid to adequate ventilation. Following the galley is a roomy saloon beautifully finished in ivory and trimmed with teak.

The owner's quarters, which consist of a large double stateroom finished in ivory and teak with adjoining lavatory and shower bath, are located in the after end of the vessel. Three single staterooms finished the same as that of the owner provide for the comfort of guests.

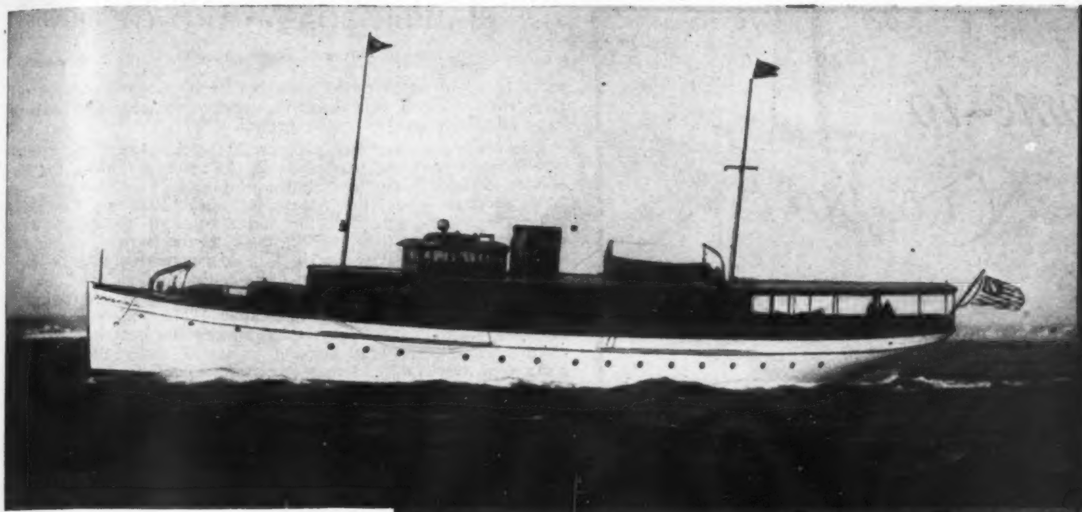
The power plant selected for Edris is well in keeping with the rest of the yacht's specifications. Power is supplied by a single screw six-cylinder 125-horsepower Winton gasoline engine turning a 2¾-inch Monel shaft which runs in Cutless rubber bearings. Not only does this installation drive the boat efficiently, but it provides a smooth and quiet cruising speed of 10 or 11 knots with sufficient fuel capacity for a cruising radius of 900 to 1,000 miles. Auxiliary machinery includes a 1½ k.w., 110-volt, 4-cylinder Universal-driven generator set together with electrically driven air compressors, water circulating pumps, bilge and fire pumps, and all the other conventional auxiliaries found on a craft of this type. Lux fire protection is provided throughout.

Edris carries a 16-foot motor tender, equipped with a Kermath engine as well as a little 12 foot rowing dinghy.

(*Continued on page* 132)



Commodore A. A. Schantz of Detroit convalescing at Miami from a severe illness which kept him out of racing activities during the past winter. The Commodore will soon return to Detroit a well man



SPINDRIFT, 102' 1½" o. a., powered with two 6-cyl. lightweight, air-less injection Winton-Diesels... Luders' designed and built for Mr. Donald Parsons

"Spindrift"

explains the Leadership of Luderships

TO THE yachtsman who has outgrown his 45' or 72' cruiser, who now requires greater spaciousness, increased accommodations, a wider cruising range, Luders' larger yachts provide the utmost in comfort and beauty, with an abundant opportunity for reflecting the owner's personal tastes and individuality.

The newcomer in the yachting fraternity who acquires a Ludership of 100, 120, or 150 feet in length, of wood or steel, will find all his problems happily solved.

May we have the privilege of discussing plans with you?

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MARINE CONSTRUCTION CO.

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THE FOURTH ANNUAL
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Other Races to be Held Here

ENTER YOUR BOAT—
BRING YOUR FRIENDS

Bigger, better;

more fun than last year!

SEND YOUR ENTRY

Narragansett Bay
Regatta Assn., Inc.

NEWPORT, R. I.

SIMPLE BOAT YARD GEAR

(*Continued from page* 94)

serve to avoid interference when both runways are used at the same time, as well as making the work of placing the boats in their allotted places an easier matter.

Timbers measuring 8 by 10, or 10 by 12 should be apportioned throughout the yard in order to serve as blocks for the cradles, following the idea shown in Fig. I.

An arrangement of this nature will mean that two directions in moving the boats from the water to their places—directly up the runways and then at right angles to the runway. Contrast this system with that shown in Fig. 3, a condition that is often followed in clubs which should know better.

The sidewise movement of the boats (Fig. 2) is accomplished by the use of planks with rollers under. The rollers under the after end of the cradle are removed when the boat has reached its allotted place, while blocking is placed under the forward portion of the cradle so that the drain hole will draw off any water which may work its way under the cover (Fig. 4).

Less blocking up is required with this system, the tendency for boats to hog is lessened, the underbody can be gotten at more readily for painting and caulking, the weight of the boat distributed over the wide area offered by the use of the large timbers lessens the promiscuous sinking of small individual blocks to a minimum.

All portions of a layup yard are not uniform as regards firmness of soil. The use of the system outlined tends to make the ground uniformly firm over all portions.

At first glance it might be taken for granted that the first boat laid up would be the last one overboard in the spring. This would not be the case, for the putting in of a few would open up various avenues for those remaining. With a power winch and a capstan in opposite ends of the yard, it would be possible with snatch blocks to translate the pulling power in most any direction and to move the boats around much as one would move checkers on a board. The capstan and the power winch should be housed with removable wooden covers.

J. E. M., Norwich, Conn.

IMPROVED DIESEL ENGINES

(*Continued from page* 53)

special alloy forged steel of high heat resisting qualities.

The camshaft is fitted with forged steel cams which are case-hardened and ground. It is driven by roller chain drive at the center of the shaft on the six and eight-cylinder engines; at the forward end on the generating sets.

Fuel injection is of the airless type as in all other Cooper-Bessemers, the system consisting of a built-in engine-driven fuel pump, duplex fuel oil strainer, pressure regulator, fuel oil manifold, shut-off cock to each injector and injector valve.

The lubrication system consists of variable speed motor-driven lubricating oil pump with push button control equipment; duplex lubricating oil strainers lubricating oil cooler; and mechanical lubricator for cylinder wall lubrication.

The six and eight cylinder engines are direct reversible, and can be reversed from full speed ahead to full speed astern in 15 seconds.

Complete engineering details and specifications on these Type LR engines will be gladly furnished to interested parties by The Cooper-Bessemer Corporation.

ELECTRIC TUGS

New York harbor may soon be the scene of quiet, smokeless shipping. The progress of electric drive has introduced many electric vessels into that port and many of the tugboats now operating there are electrically propelled.

Four more Diesel-electric tugboats are now to be added to the electric fleet operating in the harbor. The Erie Railroad Company has ordered the construction of these, their first electric boats, by Pusey & Jones Corporation, Wilmington, Delaware.

Each tugboat will be 108 feet long. Electric equipment both for propelling the boats and operating the auxiliaries will be furnished by the General Electric Company. The boats are expected to go into service late this fall.

The power plant on each boat will consist of Ingersoll-Rand engines driving two 330-kilowatt, 270-r.p.m., 250-volt main generators and two 30-kilowatt, 270-r.p.m., 120-volt auxiliary generators, all on the same shaft. The single propeller on each boat will be driven by an 800-horsepower, 105/135-r.p.m., 500-volt double motor. Variable-voltage control will be used, with control stations in the engine room and in the pilot house.

THREADED RUBBER
Willard
INSULATION

Four Willard PRT-8 batteries (PTR 21-3) are used for starting and lighting service on the "Bluefish"

The "Bluefish," a ketch-rigged motor sailor, designed and owned by W. H. Hand, Jr., of Fairhaven, Mass.

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For battery equipment more than a dozen leaders specify Willard—for all-weather battery dependability and proven battery value that will measure up to the highest standard of marine requirements.

Boat builders' choice of Willard is based on knowledge of Willard Quality.

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YARD AND SHOP

(*Continued from page* 132)

LARGE GAIN IN BOAT AND ENGINE EXPORTS

During the past year exports of motor boats and marine engines from the U. S. showed an increase in value of 32 per cent, as compared with shipments in 1928, according to the Automotive Division, Department of Commerce. It is noteworthy that these exports reached a total value in 1929, 289 per cent above the figure in 1924. In the face of keen competition, 23 per cent more motor boats were exported than during the previous year. While exports of detachable marine motors did not show as great an increase as they did in the year 1928, they were 8 per cent above shipments in 1928. On the other hand shipments of other marine motors showed the substantial gain of 38 per cent as compared with exports in 1928.

While the demand for American complete motor boats in foreign countries is limited due to high freight rates and competition with domestic builders, exports in 1929 showed an increase of 25 per cent in number and 56 per cent in value over 1928 figures. The tendency is toward higher priced motor boats; the average value of the boats exported in 1929 was $2,110 while in 1928 it was $1,659.

Shipments to the United Kingdom increased 154 per cent and that country became the leading market for American complete motor boats. Motor boats are used chiefly for sport and pleasure and the most popular type is a passenger runabout with a capacity for 8 or 12 persons. It is believed that their use for such purposes will show a steady expansion as boat clubs are being organized throughout the country. Outside of high speed boats there is little demand for imported motor boats. Most of the boats exported from the United States retail for about £550 (approximately 2,673).

Although Canada's takings increased slightly it dropped from first to second place. Canada's demand is limited by competition and the sale of boats selling for more than $5,000 is distinctly limited.

Argentina and Brazil held third and fourth places, Argentina's takings almost doubling while shipments to Brazil increased from 3 to 32. The use of motor boats for commercial purposes and especially for pleasure is increasing at a rather unusual rate in Argentina. The majority of the craft however are manufactured locally. Some of the wealthy class are willing to pay more for imported large comfortable boats and speed crafts. The heavy lift charge demanded to load American cruisers on board ocean steamers in American ports has militated somewhat against a larger sale of American boats of 30 feet and more.

The British West Indies were again the best market for higher priced boats, the average value of units imported from the United States being $6,645.

Canada remained the leading market for American detachable outboard marine motors with the United Kingdom in second place. The outboard type is used for racing and other pleasure purposes in Canada and is the most popular type. American motors have little competition. The increasing popularity of motor boating in the United Kingdom is a matter of great importance to American manufacturers of outboard motors as in this field the American product predominates. The twin cylinder type of outboard motor is most in demand in both countries.

SPEED LIMIT ON THE ST. LAWRENCE

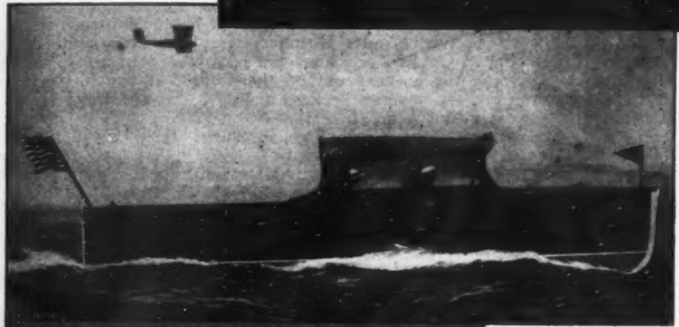
Not long ago the Pitcher-Cornair bill restricting the operation of fast motor boats in the congested districts of Alexandria Bay on the St. Lawrence River was passed by the Legislature. The measure comes as a result of a number of quite serious accidents which occurred on the American side of the St. Lawrence due to the failure of a number of operators of fast boats to use discretion in the speeds at which they travel about through the heavy traffic of the Bay. The new bill establishes a ruling that motor boats may not be operated in daylight at a speed inconsistent with safety and at night the speed of all craft is restricted to not more than 15 miles per hour.

Sign boards will be erected in the speed zone on the mainland at Point Vivian and at a point near Sunken Rock light which will bear the wording "St. Lawrence River Motor Boat Regulation Zone." Rules are prescribed in the law for the proper operation of motor boats and it is stipulated that no boat shall be operated within a harbor line at a speed exceeding 5 miles an hour. Reckless operation is defined and penalties are provided, giving the state authority to curb the offenders. It is regrettable that such legislation has become necessary on the part of the government, especially in view of the fact that so many earnest appeals have been made in the past, before any legal action was taken, requesting all boat owners to exercise just ordinary discretion and courtesy in the operation of their craft.

(*Continued on page* 138)

A·B·C· *Cruisers and* Houseboats *Give New Comforts Afloat*

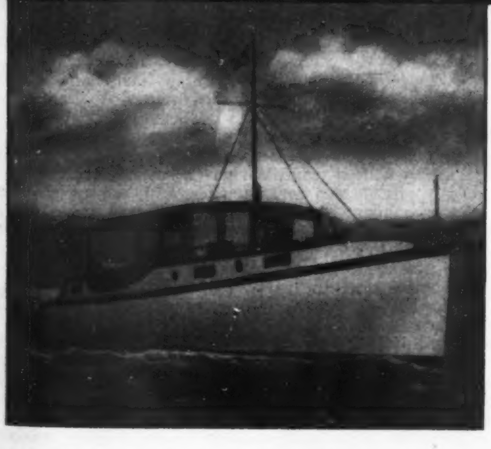
The Stephens "43", a deep water, twin-screw ship, embodying the very latest in cruising appointments for nine persons. Speed 17½ to 25 miles per hour. $14,950 in water, New York.



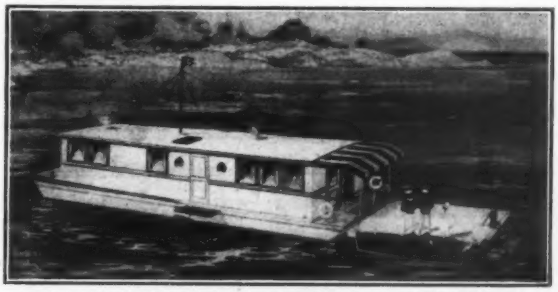
The A. B. C. 25-foot day and night cruiser. A sporty craft of mahogany construction and natural finish with optional sleeping accommodations for one to four. Powered with Gray Four-40 or Gray Eight-120 with speeds up to 27 m per hour. Price, $2,250 and up, in water, Marysville, Michigan.

TO THE newcomer, seeking maximum value and greatest return on his initial investment in boating, or to the experienced yachtsman wanting new and better comforts afloat, we recommend the selections illustrated here, which are just a few from the A. B. C. economy fleet. Whether your desire is for a deep sea cruiser sleeping nine, a smaller cruiser for four, a fast sport ship, or commodious houseboat, you will find in the A. B. C. fleet the craft of your dreams, just as you yourself would design and build it, and at a price consistent with honest quality.

Write today for full information on the A. B. C. craft in which you are interested.



Kyle 30-foot double cabin cruiser sleeping six. An ideal family boat with every modern convenience and complete to the last detail for immediate service. Powered with Gray Six-72. Price $4,985 in water, New York.



As a summer home, guest house, yacht club or shooting club, the A. B. C. forty-five foot, four-room houseboat offers the comforts and privacy of a residence ashore. Price $3,485 Marysville, Michigan. Also available with other arrangements, as a double deck, tea boat, bath house or floating dock.

AMERICAN BOAT

S. CLYDE KYLE, ***Vice-Pres. & Gen'l. Mgr.***

Corporation, Inc.

General Motors Building, 1775 Broadway, New York
Telephone: CIRcle 6218
Cruisers from twenty to seventy-five feet. Commuters, Sport Cruisers, Sailing Yachts, Small Boats.

Stretch the days

THERE'S an extra thrill in cruising at night—and an extra dividend on your boat investment. Get both by equipping with a Homelite Generating Set. It provides plenty of current for powerful searchlights, plenty of light everywhere, power for fans, pumps, anchor hoists, etc. Generator stows in 14" x 21" x 21". Price includes generator with built-in 1½ H. P. air cooled gasoline engine, 2500 watt hour battery and switchbox. Write.

$275

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HOMELITE CORPORATION
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Five Models — Advanced Designs

Fifty-Five Foot Twin Screw Cruiser—$35,000
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Forty-Foot DeLuxe Enclosed Bridge Double Cabin Cruiser—$12,950
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Also
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Send for catalog.

THE THOMAS LAUGHLIN CO.
144 Fore Street Portland, Me.

YARD AND SHOP

(*Continued from page* 134)

SPEED BOATS IN COMMERCIAL USES

Each day throughout the long balmy northern summer days speedy water craft may be seen darting from the tiny harbor directly under the frowning ramparts of old Fort Mackinac, on Mackinac Island, at the head of Lake Huron, destined to the many interesting harbors and islands dotting the shores of nearby lower and upper peninsular or to more distant points in Lake Michigan, St. Mary's River and Georgian Bay Islands. Not only are these speedy craft of the boat builder's art devoted to the pleasure of yachtsmen and anglers, but enviable commercial records are also being established by the firm of Pfeiffelman & Son, with their fleet of Hacker craft and Chris Craft, pioneers in the establishment of commercial water-borne speed traffic. The fleet of speed boats operated by the concerns engaged in a general passenger traffic have established the following record which has not been paralleled, as relates to equipment, stamina, operating under similar strenuous service conditions.

First, a used twenty-six foot Hacker Craft with a Scripps F 6 motor, 100 h.p., was purchased in 1926. Since that date this boat has covered sixteen thousand miles and carried seven thousand passengers. After two years of use the motor was replaced with a new F-6 Scripps and the last two seasons has run without a cent of repairs and not one bit of trouble. The boat has had the usual spring scraping and varnishing, has been upholstered once, and when this boat is cleaned up one can hardly tell it from a new one. It has made numerous trips of six to twelve miles when cruisers have been laying to for weather. On two occasions the boat was pounded so hard as to break the bottoms out of the front seat, but as yet a rib or frame was never broken, and last but not least, the boat does not leak a drop.

A new Chris Craft was purchased from Chris Smith & Sons in the first week of July of 1926. This boat has covered between fifteen and sixteen thousand miles and has carried about seven thousand passengers. It is equipped with a 100 h.p. Kermath engine. A new motor was installed last summer. These boats carry, besides their regular equipment, an outboard motor which is used as an emergency. Only on one occasion was the outboard used when the boat ran over a log at night and bent the shaft and propeller to the extent they would not turn. The outboard motor was used for a distance of six miles making about four miles p.h. or the entire distance in one and one-half hours. The motor was an Elto Speedster of six horsepower. These boats are called on to make various trips in and around the Straits of Mackinac, and on many occasions have run down passengers boats to land some one, or party, who have been unfortunate and missed their steamer.

Some times one gets an urgent call and has only a few minutes to catch a train at Mackinaw City, a distance of nine miles and their only chance is to take a speed boat. Many trips of this character have been made and never has a party been disappointed. A young man was stricken with appendicitis and rushed to the mainland in a speedboat and then by car to a hospital.

One evening a negro was shot. The boat was called on to go to St. Ignace and bring the sheriff and an undertaker over. In a couple hours' time the party was back in St. Ignace, including the corpse. From twelve to fifteen hours were saved and the assassin duly apprehended.

During the Governors' convention at the island, papers were carried from Detroit to Cheboygan by plane, as there are no landing fields at Mackinac, and then by speed boat to the Fairy Isle and delivered all within a few hours' time, so the governors read the news about the same time as people in Detroit.

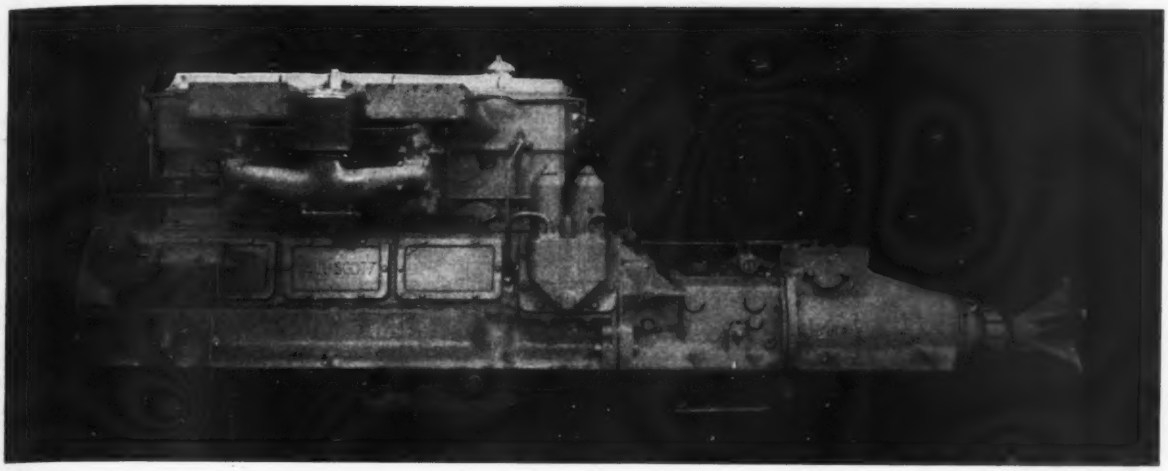
This winter the state built a dock in the harbor opposite the Old Fort, which will accommodate fifteen to twenty of the largest cruisers besides many smaller boats, so the yachtsmen will have real docking facilities this summer.

A new twenty-eight foot Hacker Craft with a 150 h.p. Scripps will be added to the fleet of speedboats this summer and thus will give more and better service.

HACKER OFFERS CUSTOM SERVICE

A special custom department has just been inaugurated by the Hacker Boat Company, Mt. Clemens, Michigan. In this new department designs will be prepared to meet individual requirements by John L. Hacker, N. A. and custom boats built for those who prefer the individuality of this type of craft. This custom department will include the design and construction of racing hulls, special de luxe runabouts, sedan cruisers, commuters and speed cruisers.

(*Continued on page* 138)



Model HD, 175 h.p., with Hall-Scott double reduction gear. Gear ratios, 5:1 and 7:1, giving 360 and 256 r.p.m. of the propeller shaft at 1800 r.p.m. of the engine.

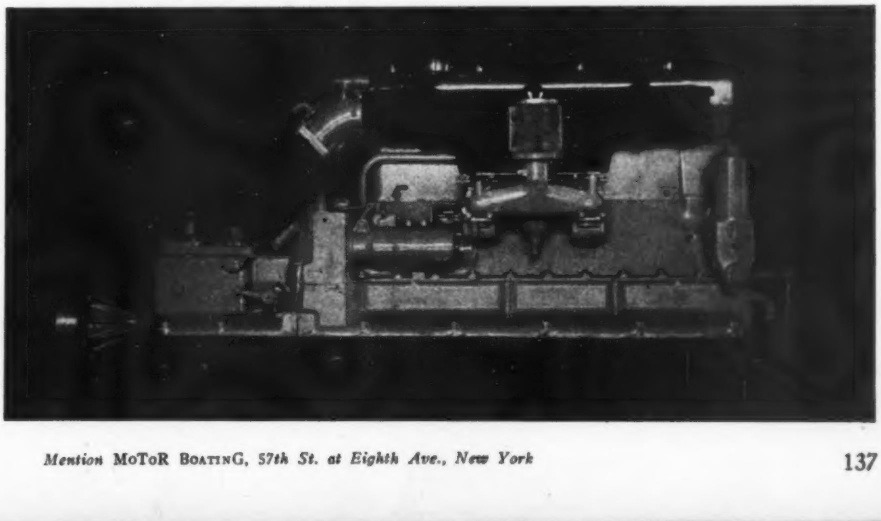
Here are good, sound reasons for choosing Hall-Scott to power your Cruiser or Yacht . . .

The dependability of the Hall-Scott engine is world famous, but it offers you a great deal more than that. With the new Hall-Scott Double Reduction Gear, this superior power is now available for the largest cruisers and sailing yachts. Driving through either the double or the single reduction gear, the Hall-Scott engine delivers every ounce of power to your propeller shaft. Of particular interest to owners of sailing yachts is the fact that the Hall-Scott reduction gears provide a positive neutral, so that a feathering propeller is unnecessary : : Both reduction gears are constructed to operate with an absolute minimum of vibration and noise. The single gear gives a reduction of 2:1 and 3:1 and the double gear, providing a double reduction through a silent internal gear, gives optional reductions of 5:1 and 7:1, all with proportionate increase in thrust : : The engines shown here are only two of a large group. We would like to tell you exactly what Hall-Scott will do for your boat. When you write, please mention both size and type.

HALL-SCOTT MOTOR CAR COMPANY

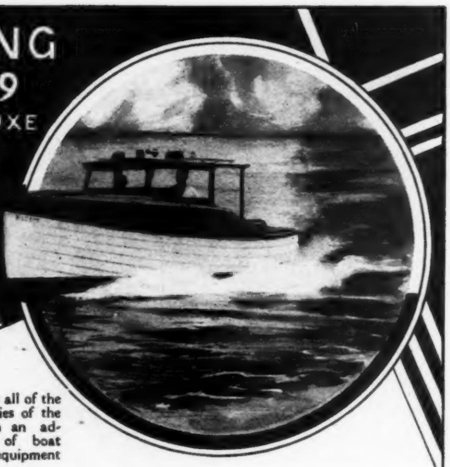
Division of American Car and Foundry Motors Company • 217 West Fifty-Seventh Street, New York

Distributors for Long Island: *Freeport Boat and Engine Co., Foot Cornwall Avenue, Baldwin, L. I.*



Model HSR-6 100 h.p., with Hall-Scott single reduction gear. Gear ratios, 2:1 and 3:1. Illustration of engine shows new one-piece hot spot intake and exhaust manifold, dual marine type carburetors, and special air intake manifold.

KING
29
DE LUXE



Here you have all of the superior qualities of the King 28 with an additional foot of boat and de luxe equipment throughout.

KING Sea Skiffs—The Boats That Built Sea Skiff Reputation!

FOR nineteen years, in boats of all sizes, seaworthiness has been the first quality in every King Sea Skiff. Good, strong boats built to stand rough seas, give maximum comfort and desirable speed. They are constructed of the best materials by master craftsmen and are popular wherever yachtsmen put out to sea. Orders are now being placed for delivery three months ahead. Every boat custom built. Our factory is always open to visitors and you are always welcome.

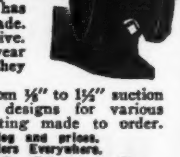
KING SEA SKIFFS

Originators of Fast Sea Skiffs

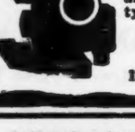
KING BOAT WORKS
HIGHLANDS,
NEW JERSEY

REGAL QUALITY

LOBEE CIRCULATING & BILGE PUMP



You can't get a better or more reliable pump than the Lobee because there isn't a better one made. It has been the World's Standard of Pump Quality for 25 years. No other pump has proven so popular in the marine trade. Simple, compact, noiseless and positive. These pumps will outwear the engines to which they are attached.



Gear and Rotary Pumps from ⅛" to 1½" suction and discharge. Different designs for various types of drive and mounting made to order.

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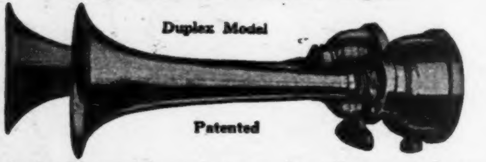
Compressed Air Marine Signal



Made in 15 models and tones for all types of sea, river and lake craft. Send for catalog.

J. THOMAS RHAMSTINE*
Successor to American Strombos Co.
504 EAST WOODBRIDGE DETROIT

YARD AND SHOP

(*Continued from page* 134)

SECOND REGATTA AT LIDO

The Committee of the Second International Motorboat Competition which will take place September 17- 21, 1930, in Venice will publish within a few weeks the official program and the regulations for the prizes and cups, which will be run during the meeting.

Sir Henry Segrave with his Miss England won last year the Challenge Cup of H. R. H. the Prince of Piedmont, developing a speed of about 91.9 m.p.h. This year the cup, which must be won twice, will be again in the competition and $10,000 will be awarded the winners.

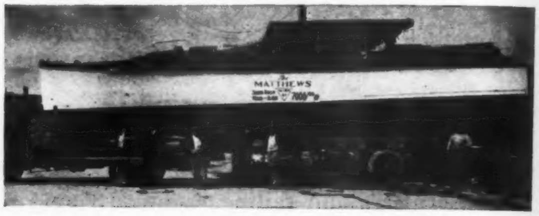
Also the Grand Prix of Venice and the Mussolini Cup, won the last year by Francois Sigrand (France) with Pah Sih Fou II will be run again. The money prizes for this race are $11,500.

For the Challenge Cup of Count Volpi di Misurata, which has also been won by Sir Henry Segrave, $14,500 will be awarded to the winners.

For the second time there will be the competition for the Cup of the Federazione Italiana Motonautica with $3,500, which was won last year by Marcel Jalla (France) with Yzmona III.

The Cup offered by the Prince of Udine for seagoing cruisers is a new trophy.

Two other new cups with $5,400 money prizes are the Cup Navigazione Veneta a Vapore for cruisers up to 366 cubic inches and the Cup Navigazione San Marco for cruisers from more than 366 cubic inches up to 732 cubic inches.



Unloading a 46-foot de luxe cruiser at the freight yards in Houston, Texas, for the Sebo Boat Company, Matthews representatives on the Gulf

NIAGARA DISTRIBUTORS

Announcement is made by the Niagara Motors Corporation of Dunkirk, N. Y., of several new representatives who are to handle their line. In St. Louis, Missouri, William Grossmann is to be the new distributor with headquarters at 1908 Olive Street. In Cuba, E. G. Abreu, S. en C., Presidente Zayas No. 8, Havana, has also been appointed. Henry A. Pohl of 410 N. E. 13th Street, Miami, Florida, has been a distributor for Niagara engines for over two years and continues to handle the line in that territory.

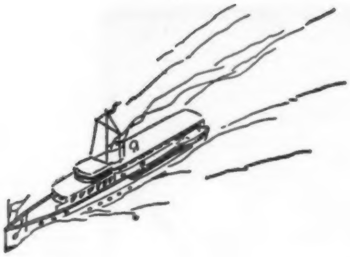
CURING THE OBSTINATE LEAK

Now that your boat has been in the water several weeks you are beginning to see some of the mistakes you made in that hurried repair job. Perhaps your garboard strake has developed a leak—maybe your cabin, where it joins the deck, lets in just enough water so as to saturate the most comfortable spot in your bunk. The cabin leak can be repaired easily enough, but your garboard leak must wait until you have an opportunity to haul her out to do the job right. We all learn from experience, so let our errors teach us the lesson of going to experts to learn the right way of leak prevention. L. W. Ferdinand & Co., 152 Kneeland Street, Boston, Mass., have compiled an interesting booklet, called Weak Spots which is the result of scores of years' experience in the art of making boats watertight. You may have this booklet free of charge by sending them your name and address.

DOTY APPOINTED SALES MANAGER

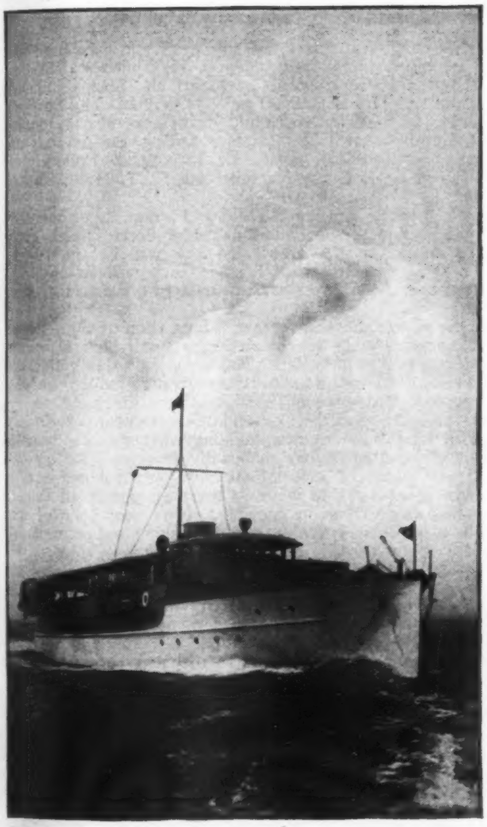
Due to the very rapidly expanding business of the Century Boat Company, which has made it impossible for the general manager, George G. Eddy, to continue to look after the details of sales administration, E. A. Doty, of St. Petersburg, Fla., has been appointed sales manager of the Century Boat Company. Mr. Doty is a man of years' experience in boating and actual business training which assures all interested dealers and sales people connected with the industry the finest kind of continued cooperation from the Century Boat Company.

(*Continued on page* 140)



A LUXURIOUS HOME

. . . *and your playground the sea*



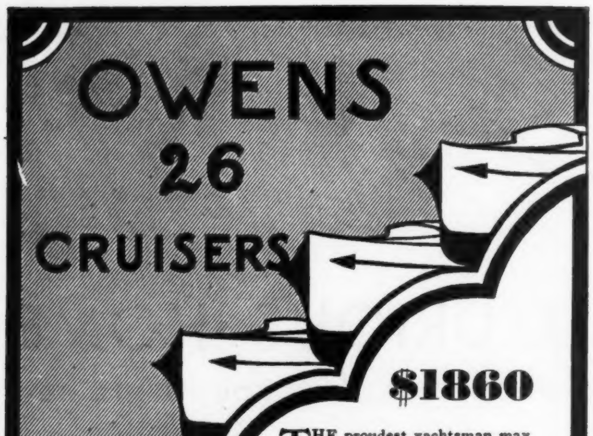
A 106-foot **Speedway** Diesel powered yacht

● Think of the healthful enjoyment a trim Consolidated Cruiser would bring to you and your family. Invigorating week-end sails...a glorious Vacation Cruise...away from the noise and dust of traffic-clogged roads. To many a Consolidated owner, his boat is virtually his summer home . . . and his means of commutation . . . Beauty, Luxury and Comfort, combined with extreme seaworthiness and abundant power, distinguish every Consolidated-built, Speedway-powered craft. You will see them pointed out wherever fine boats drop anchor.

● *To insure delivery of your Consolidated boat next Spring place your order with us now.* Send for booklets regarding any type of boat or power-plant. We will gladly submit specifications without cost or obligation to you. Act at once...write to us today.

● *Thousands of Speedway boats and engines are in yachting service, in Government use, and in the trade.*

CONSOLIDATED SHIPBUILDING CORPORATION
MORRIS HEIGHTS NEW YORK



THE proudest yachtsman may well praise this cruiser of 26 feet, find built into her the quality, fine materials and comforts of yachts selling for over a thousand dollars more.

Fast, up to the minute, equipped for every comfort, including berths, galley, toilet and lots of real privacy this cruiser is mahogany over white oak framing with bronze fastenings throughout. Speed 16 miles per hour. Equipped with 44 h.p. Gray Motor.

An unusual sales plan offering the boat direct from builder to you places it well within your reach.

Only a few more left for quick delivery — who will get them? Write for particulars or visit our factory.

Owens Boat Co.
Annapolis Maryland

"THE RACE WAS LOST
Because of Bilge Water"

How often this occurs. Many an otherwise winner has been nosed out because of the weight of bilge water accumulation. Get the most out of your boat. Equip it with the **ST. CLAIR SELF-BAILER**; it keeps the bilge dry, releases bottom suction, increases speed, pulls out dangerous gas fumes. Works automatically. Models for every type of boat. Write, stating whether interested for inboard or outboard craft.

Your dealer sells them.

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ARTISTIC STEEL FLOATS

Of striking beauty and staunch construction these Artistic Steel Floats are designed for use as permanent moorings. They may be constructed in any size and anchored in any harbor.

WALSH-BUGBEE COMPANY, INC.
Marine Construction Engineers

NEW YORK CITY
4 West 56th Street
Telephone: Circle 4653

FACTORY OFFICE
206 East Hanover St., Trenton, N. J.
Telephone: Trenton 6257-8

YARD AND SHOP

(*Continued from page* 138)

CONSOLIDATED NOTES

Things are humming with activity down at the yards of the Consolidated Shipbuilding Corporation, Morris Heights, New York City. Many yachts have been unhoused and are now undergoing the usual spring grooming for the summer. During the winter months many of the yachts in storage have been repowered and will come out with new engines this season.

G. H. Walker's Commuter Wild Goose II, has been re-engined with two 180 h.p. Speedways. H. S. Spaulding's Cruiser Content will have two new 115 h.p. Speedways. G. W. Gair's Cruiser Gairlee has been repowered with a new 115 h.p. Speedway. The Cruiser Kiukaju now known as Veda, owned by J. J. Murphy, will appear with a new pair of 180 h.p. Speedways and H. L. Pratt's Tokio a runabout will have a new 25 h.p. Speedway. Among the first yachts to be commissioned this spring at Consolidated are owned by prominent sportsmen. Aphrodite owned by John Hay Whitney, was the first to clear from the docks. Mr. Murphy's Veda followed. Harvey Gigson's Mystery, a Consolidated built Speedway powered Commuter was the first to make her daily runs between Glen Cove and the New York Yacht Club Station, at 26th Street.

Other prominent boats have already been put overboard and are being rapidly commissioned. George H. Pynchon's Vasanta, Richard Hoyt's Hashier, W. C. Robinson's Solana, Stanley Joyce's White Cap II and F. W. Trabold's Wilma. The Southern boats are now on the way back and several have already docked for spring outfitting at Consolidated. Among the arrivals are Lone Eagle owned by Alexander D. Thayer, of Philadelphia; Pleiades, owned by J. Lester Parsons' and H. T. Hollingshead's Isabella II.

To this year's fleet Consolidated will add a number of outstanding examples of yacht workmanship. The Steel Diesel Yacht Avalanche, for Anson W. Hard, 154-feet, will be the largest. Two other Steel Diesel Yachts 135-feet each will follow. The wood boats range from 55 to 82 feet in length, a dozen or more in number.

During the winter months, the small boat shop of Consolidated was working to capacity to complete the small boat equipment for the large steel yachts Rene, Nakhoda, Lotosland, Savanna and Cambriona. In addition to these tenders which included owners, coupe starboard launch, port launch and life boats, tenders for the yachts building at the Consolidated were also completed.

The added facility of six new building ways recently installed at the Consolidated plant has materially increased the season's output. Those ways will also be used for overhaul and repairs. Having only four available ways in the past, prevented hauling out more than four boats in one day. It is now believed that there will be no delay. Yachts will be hauled out immediately upon arrival at the yard.

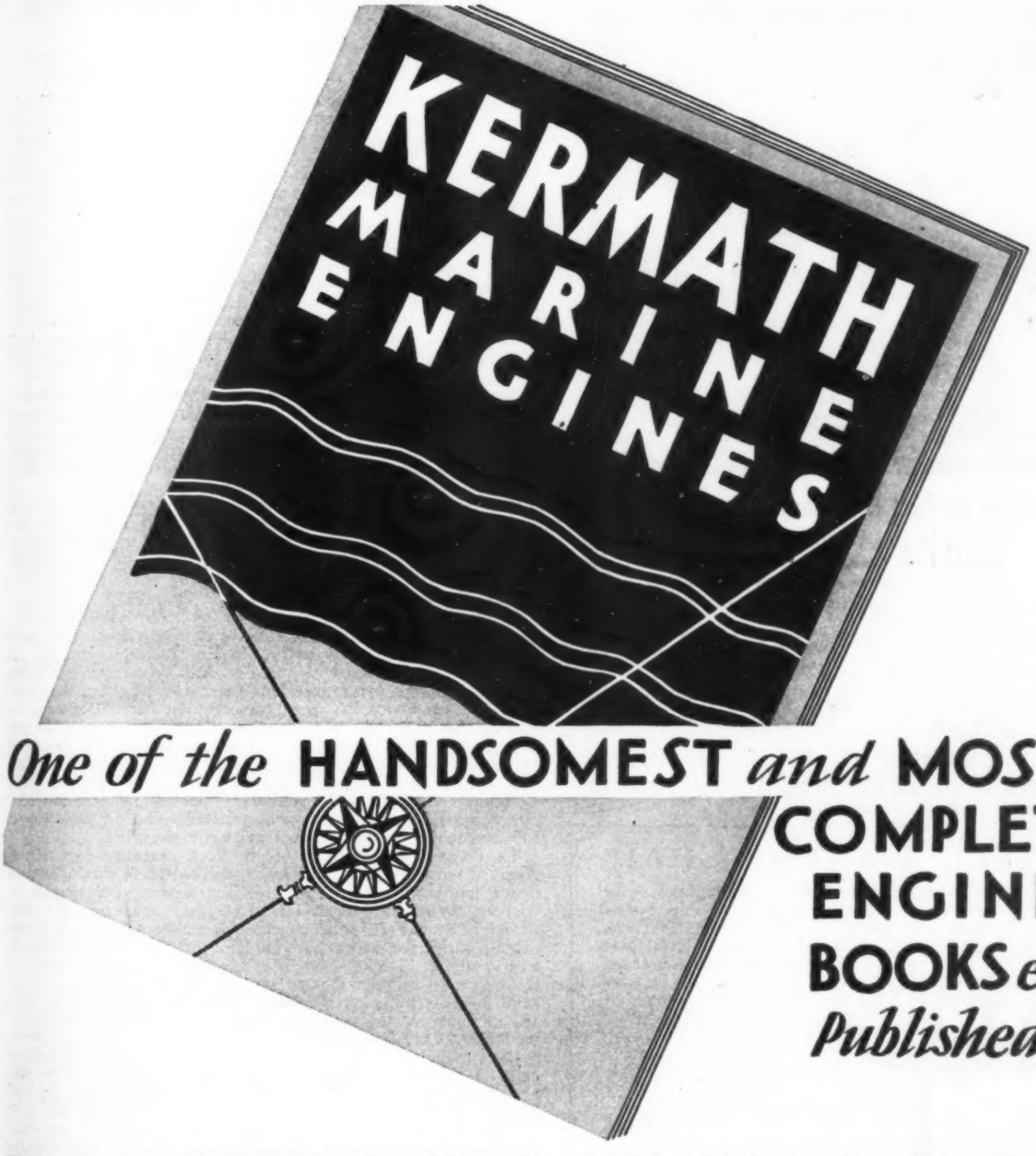
A. P. B. A. OFFICIALS APPOINTED

To take care of the increasing activity in boat racing and in motor boat sport generally in the new northwest section of the American Power Boat Association, a number of officials have been appointed to act in that locality; as referees, H. C. Jackson and S. A. McQuillan of Vancouver. Both of these officials are enthusiastic followers of outboard racing and are well qualified to look after the many details which this office entails. R. W. Gardiner was appointed as starter and is another man who is thoroughly familiar with all the regatta details. He has served as starter at all of the prominent regattas in the Northwest. The office of measurer has been filled by G. McDonald, who has had many years of practical experience in servicing outboard engines. The office of surveyor will be filled by E. H. Longley, who is a qualified civil engineer and surveyor as well as a yachtsman, so that he knows what is required of a race course from both the practical and technical standpoints. As timers P. Charlesworth and D. H. Ramsbottom will function at the regattas, and since both are familiar with the handling of watches there should be no complaints on times. Two scorers, Messrs. G. F. Baldwin and J. A. Sampson, look after the note book end of the racing and altogether it seems as though a very excellent lot of officials have been arrangd for.

MOUNT YOUR OUTBOARD FORWARD

Outboard engines have been mounted on transoms for some time, and even on the side, but we venture to say that mounting an outboard on the forecastle-head as it were, is a bit unusual. A. A. Nichols, an outboard enthusiast of Waltham, Mass., has done this, however with great success. The engine is attached to a bulkhead about a foot away from the bow and it extends down through a well in the bottom planking. Ths arrangement gives the punt a good planing angle at all speeds or even when standing still. He claims to get about 22 m.p.h. with his motor muffled.

(*Continued on page* 142)



One of the **HANDSOMEST** *and* **MOST COMPLETE ENGINE BOOKS** *ever Published*

Those who are interested in the subject of yachting and marine engines will find the new handbook just published by Kermath an instructive, readable and fascinating story of boats and their power. It is profusely illustrated with every type of boat from the small fishing launch to the fast runabout and fine sturdy cruiser.

The complete story of marine power application has been carefully treated in brief form. Never before has the yachtsman or prospective boat owner been able to secure such an informative cross section of the "why" of marine engine design, its adaptability and usage.

Send for this book today. It is authoritative, understandable, comprehensive . . . . . it is something you'll be glad to keep in your files for reference.

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because it covers twice the Surface, lasts a long time, and is the most effective Bottom Paint produced.

"The highest grade product that can be used."—JOHN H. WELLS, Inc.

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SWIVEL FISHING CHAIR

with detachable back, rod holder and swivel rod socket. It is quickly removable without tools and leaves the deck flush. The wood used is high grade hickory and all metal parts are Hyde manganese bronze.

With swivel rod socket to fit either straight or tapered rod butts, or universal socket which fits both types of butts.

$90. $100. $110.

A NECESSITY IN BIG GAME FISHING

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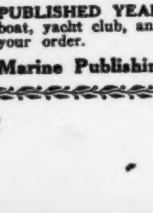
H. W. MAJOR

maker of fine salt water fishing tackle
155 Chambers Street
NEW YORK, N. Y.



DE LUXE YACHT LOG

For Pleasure Entries.

Keep a record with notes, sketches or photographs, the interesting happenings of cruises, fishing parties or races.

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Size 8" x 11"
Price $12.50

PUBLISHED YEARLY—Be sure and send the name of your boat, yacht club, and design of your house flag in colors, with your order.

Marine Publishing Co., Box 265, Beverly Hills, Cal.

YARD AND SHOP

(*Continued from page* 138)

WESTERN RUNABOUT DEALER NAMED

Dart Boats, Inc., announces the appointment of the California Boat & Equipment Company, 3283 West Tenth Street, Los Angeles, as southern California distributors of Dart Runabouts.

The California Boat & Equipment Company is a new name in the marine field and is composed of several extremely successful California business men whose operations in other lines of endeavor have been marked with extreme success.

The president of this new marine sales firm is James Talbot, who is also vice-president of the Richfield Oil Company. Mr. Talbot needs no introduction in these columns for he has long been an ardent yachtsman and, besides owning a ninety-foot yacht, is also the builder of Miss Los Angeles and Miss Rioco, two of the fastest and most expensive racing hydroplanes on the Pacific Coast. Miss Los Angeles, it will be remembered, was especially constructed and designed for the Harmsworth trophy race held in Detroit last September.

Associated with Mr. Talbot is F. H. Denman, vice-president of the Denman & Grier Steel Company. Mr. Denman is president of the Civic Regatta Association and vice-president of the Junior Chamber of Commerce in Los Angeles. He is a yachtsman of note and his name has long been identified with cruiser racing.

Other associates are Waldo Tupper, vice-president of the Los Angeles Athletic Club and a member of the National Organization of Motor Boat Shows. F. H. Porter, vice-president of the Motor Car Dealers Organization is also connected with the California Boat & Equipment Company.

OPENING THE SEASON WITH VICTORIES

Continuing its usual record of wins in the important speed contests throughout the country, Duplex Marine Engine Oil has opened its 1930 season with three records to its credit. Duplex Oil, since its first appearance four years ago, has been the choice of champions in marine speed contests. In Florida, toward the end of the 1929-1930 winter season Gar Wood drove his record-breaking Miss America VIII to a new world's record of better than 96 miles an hour. As he has been using Duplex Oil successfully in all of his speed boats for the past four years, Commodore Wood again selected Grade Z Duplex for Miss America VIII and found perfect satisfaction in the way it lubricated his powerful motors at that high speed.

Then again in the Albany-New York outboard race run in April, the winner, J. E. Wilkinson, demonstrated that a Johnson motor lubricated with Duplex oil is a winning combination by flashing across the finish line first after averaging 39 miles an hour for the 133-mile course, not to mention the fact that he lay adrift for about half an hour off the City of Hudson with water in his gas line. There is quite a difference between the big multi-cylinder motors used in Gar Wood's boat and the little Johnson hung on the stern of Wilkinson's craft but Wilkinson found, as Gar Wood did, that he could depend absolutely on Duplex Oil's keeping his motor at the peak of its efficiency.

During the same race, the first of these in which an inboard class was entered, Jack Prosser, driving a new Dee Wite runabout powered with Gray engine and lubricated with grade S Duplex outdistanced all competitors and finished first in a field of fifteen entries. This consistent performance removes any possibility of doubt that the success of Duplex can ever be attributed to luck, but demonstrates conclusively that it is an oil that can be relied upon to give perfect performance under severe conditions.

PROMINENT YACHTSMAN ROYALLY ENTERTAINED

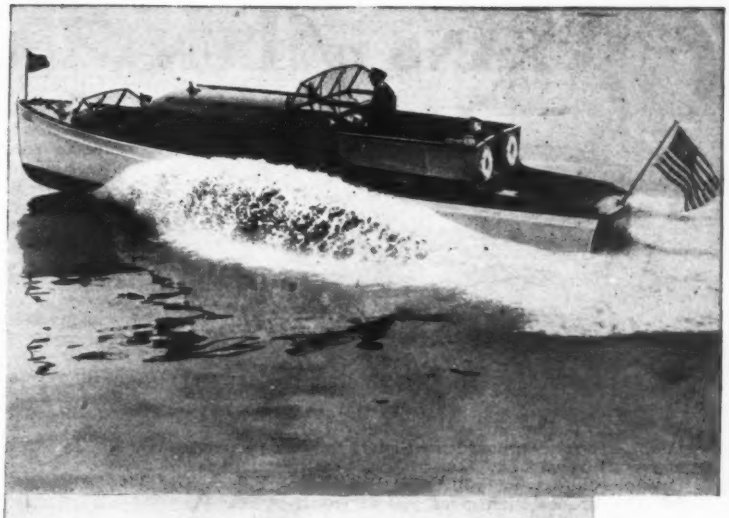
A short time ago George Harrison Phelps, prominent in yachting activities, was entertained at a complimentary luncheon given in the House of Commons by members of Parliament, including Lord Lymington, Right Honorable Arthur Greenwood, Minister of Health; Hon. John Strachey; Hon. E. G. Summerville; Hon. W. E. D. Allen and others.

Mr. Phelps, head of an international advertising agency bearing his name, is in England as special commissioner of labor, appointed by Secretary Davis to make a survey to determine the extent to which manufacturers in important industrial centers of Great Britain and the Continent have adopted American production methods and wage systems.

Two years ago Mr. Phelps addressed the House of Commons while in London as representative of the Yachtsmen's Association of America and the Gold Cup Committee, to complete arrangements for British entries in the 1929 Harmsworth Races on the Detroit River.

(*Continued on page* 144)

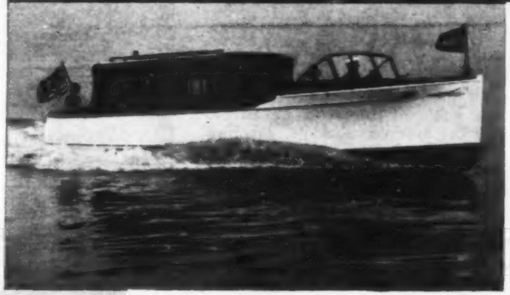
One of these boats has been built exactly for you! There's still time for you to have it this Summer



The a.c.f 38′ Express Cruiser . . . superb for sports or commuting. Plenty of outside room. Two cockpits and spacious bridge deck. The cabin has real living comfort for four. Speed 25 miles to 31 miles, depending upon your choice of engines.

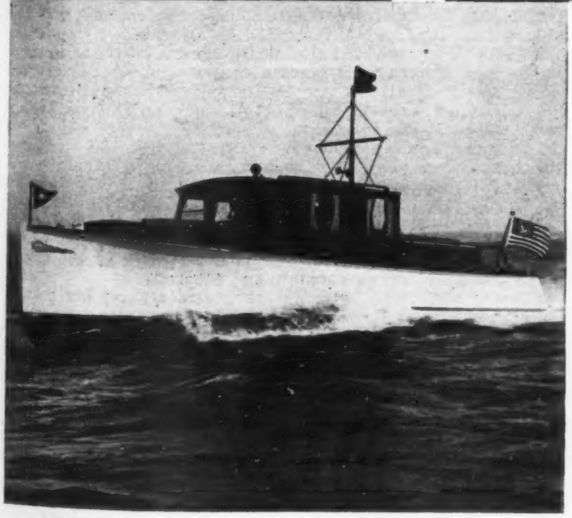
The a.c.f 54′ Motor Yacht . . . the utmost in luxury. Beautifully furnished and decorated cabins, with real beds. Luxurious lounge and dining saloon. Spacious decks. Powered by two Hall-Scott engines which will give you all the speed you will want in a yacht of this size.

The a.c.f 47′ Cruiser . . . gives every comfort during a cruise of any length. There's room to spare all over the "47." Cabins are unusually large and comfortable, and the galley is a "land-size" kitchen!



a.c.f

The a.c.f 30′ Cruiser Runabout . . . drives like a runabout, with a runabout's speed, yet it gives you a new cabin arrangement with all the comforts of living. Full length beds, complete galley, toilet room.



The a.c.f 46′ Cruiser . . . two cabins, each with its toilet room adjoining. A large combination navigating-and-dining saloon serves also as a lounge. Twin screw, engined to give you 18 to 20 miles an hour.

Come in here and go over these boats at your leisure and ask us to show you all the other models we build, from a 30′ cruiser to a 68′ twin screw yacht. One of them has been built to fit your ideas of what *your* boat ought to be. You can have it for this summer . . . on terms, of course, if you wish. We can still promise you a prompt delivery. : : If you can't come in, we'll send complete details immediately at your request. Telephone Circle 9469.

AMERICAN CAR AND FOUNDRY CO.
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OCEANS of FUN

with this Sporty Runabout at one-third the usual cost

The boat you've always dreamed of owning—runabout, cruiser, outboard speedster, sailboat or most any craft your fancy desires—can now be yours for only one-third what you expected to pay. Think of it! The Brooks Plan gives you $3 worth of boat for every $1 you spend.

Here's how it's done: You send at once for catalog showing 55 different Brooks Boats—pick just the craft you want. We send it to you knocked-down. You save 2/3ds your boat money by assembling it in your spare time. Thousands are doing it every year. It's very simple. No need to be a carpenter. All you require is a hammer and a little space in your garage, cellar or yard. Have the boat you've always wanted. Send 10c today for the new Brooks catalog giving full information on 55 different models —cruisers, runabouts, speedsters, sailboats—most any craft you want.

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Complete Marine Service

at the Brewerton Shipyards of the Syracuse Motor Marine Corp., located just west of the Brewerton bridge on the south bank of the Oneida River. Inside and outside winter storage, dockage, gasoline and oil, all kinds of boat supplies, expert hull and motor men. Also distributors for Chris Craft, ACF Cruisers, DeeWite runabouts, Caille outboard motors, Boyd Martin Boats.

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CLEAN YOUR BOAT . . .
INSIDE AND OUT
WITH THIS
PERFECT PAINT CLEANER

Restores original finish without harming surface. Unsurpassed in Engine Room. Removes grease instantly. Whitens Canvas, Cleans Sails.

1 qt., 75c; 1 gal., $2.00; 5 gal., $7.50
Packed in cans. F.O.B. Phila., Pa.
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Established 1896

YARD AND SHOP

(*Continued from page* 142)

GENERAL MOTORS TO ABSORB WINTON

The further expansion of General Motors into diversified lines of industry is indicated by their recent announcement of their offer to purchase the Winton Engine Company through exchange of stock. The proposition, it was stated, has been approved by Winton directors and the proposal was to be submitted to a vote of the stockholders.

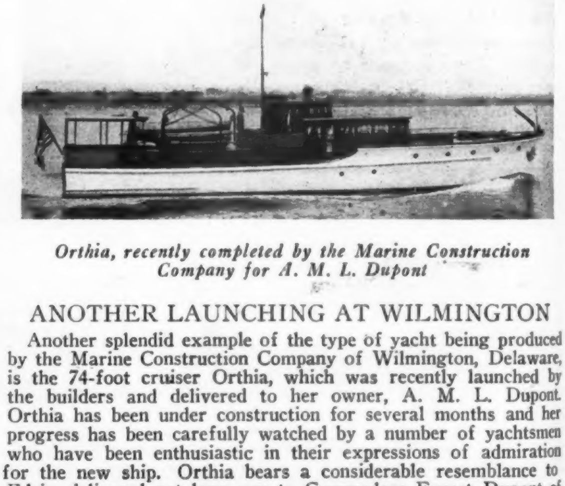
This is not the first acquisition by General Motors of the resources of a gasoline and diesel engine building company since it is only last fall that the Allison Engineering Company was added to their holdings. Acquisition of the Winton Engine Company will give General Motors a controlling interest in the Winton Aviation Company, the remainder of that stock being held by the Detroit Aircraft Corporation.

It is expected that General Motors' initial large scale attempts in the aviation engine fields will be made under the direction of the Cadillac Motor Car Company, which has already done some experimenting in that direction, as well as in the marine engine field.

EUROPEAN AGENCY OPPORTUNITY

A request has been received from a Dutch organization indicating their desire to establish a connection with American manufacturers of marine motors. Companies desiring to extend their distribution in this portion of Europe should communicate with N. V. Algemeene Garage & Automobiel Maatschappij, Hofweg, 9, The Hague, Holland.

V. A. Lyman of Balboa, Panama Canal, has also written us expressing an interest in motor boats and marine engines and marine equipment in general and would appreciate it if advertisers would send him any literature they may have available for distribution in connection with their products. His address is Box 735, Balboa, Panama Canal.



Orthia, recently completed by the Marine Construction Company for A. M. L. Dupont

ANOTHER LAUNCHING AT WILMINGTON

Another splendid example of the type of yacht being produced by the Marine Construction Company of Wilmington, Delaware, is the 74-foot cruiser Orthia, which was recently launched by the builders and delivered to her owner, A. M. L. Dupont. Orthia has been under construction for several months and her progress has been carefully watched by a number of yachtsmen who have been enthusiastic in their expressions of admiration for the new ship. Orthia bears a considerable resemblance to Edris, delivered not long ago to Commodore Ernest Dupont of the Corinthian Yacht Club of Philadelphia. Orthia will also be numbered among that fleet.

Orthia's design was prepared by experts of the Marine Construction Company with a view toward producing a sturdy and substantial twin-screw gasoline yacht of generous accommodations and ample comfort and a speed of about 15 miles an hour. The power plant consists of a pair of six-cylinder 176 h.p. model H. D. Hall Scott motors driving through reduction gears which cut down propeller shaft revolutions to one-third of the motor speed and drive Orthia smoothly and efficiently.

Owners' and guests' quarters are located aft and are beautifully finished and furnished. A double stateroom with communicating bath is provided for the owner, while just forward of this are located two single and one double stateroom for guests. All are finished in ivory with mahogany trimmings. Shower baths are lined with German silver.

Construction is heavy, being 1½ inch double planked of Oregon pine and Philippine mahogany, galvanized fastened to white oak frames. Main decks are selected 1½ inch teak and all exterior joiner work is of selected teak trimmed with chromium plated brass.

(*Continued on page* 146)

BOATING SEASON'S HERE!

Enjoy It with a

Dee Wite

In July . . . Bathing

DANCING waters are inviting you to get your share of boating pleasures—with a Dee Wite.

Why envy others whose craft speed past your landing? Join them in a Dee Wite! A few hours time at the most will enable you to select the Dee Wite that you want. Order it today and drive it tomorrow. Pay for it as you enjoy it, if you prefer.

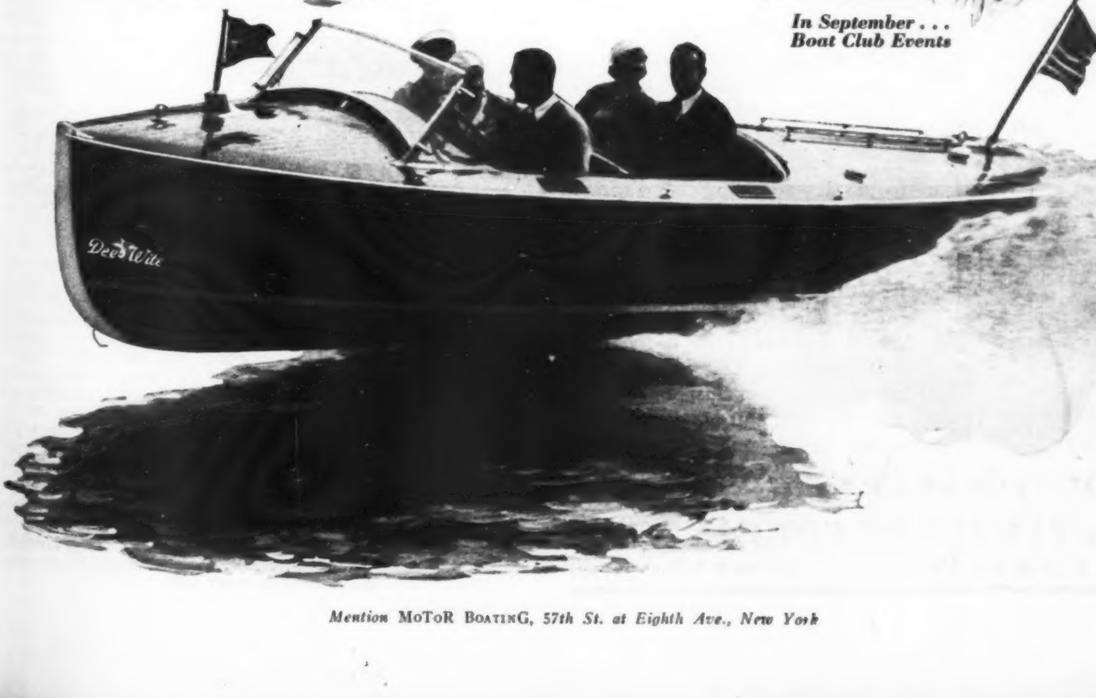
Twelve outstanding models comprise the Dee Wite Fleet—America's Finest Fleet of Popular Priced Motor Boats. One de luxe outboard model; Eleven dashing inboard models; 16, 17 and 19-foot; speeds up to 40 m. p. h. $535, $1185, $1385 and up to $2685, f. o. b. factory. See them at your dealer's. Write for catalog.

DWIGHT LUMBER COMPANY . . . ***Boat Division***
Department 57 **DETROIT, MICHIGAN**

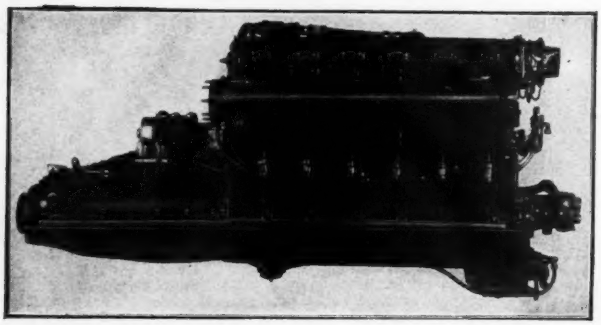
In August . . . Picnicking

In November . . .
Duck Shooting

In September . . .
Boat Club Events



POWER

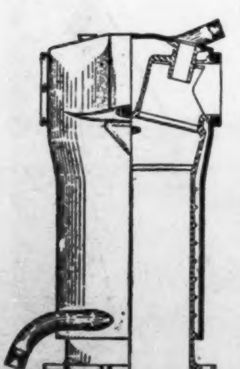


is one thing on a chart but another in actual, everyday

PERFORMANCE

In selecting any engine for your craft, your power plant considerations are naturally influenced by what you know of the dependability and durability of the engine.

VIMALERT engines are renowned for their superior performance and reliability under any and all water conditions. Hard use can in no way impair the positive operation of any Vimalert.



The cylinder water jacket arrangement (illustrated to the left) of the VIMALERT ENGINES is especially designed to indefinitely offset corrosion resulting from salt water contact and spray. The material used for these jackets is Armco pure iron of 9/64 inch thickness, chosen for its ability to withstand corrosion more effectively than any other metal that could be utilized in this instance. This is only one of the many exclusive features found in this sturdy, dependable power plant.

425 H.P. at 2000 R.P.M.—Weight 1800 lbs.

The VIMALERT COMPANY, Ltd.
835 Garfield Ave. Jersey City, N. J.

YARD AND SHOP

(*Continued from page* 144)

NAT'L ASSOCIATION OFFICERS ELECTED

At a meeting of the Executive Committee of the National Association of Engine and Boat Manufacturers held Wednesday, June 11, 1930, Charles A. Criqui, president of the Sterling Engine Company, Buffalo, N. Y., was elected 1st vice-president; John B. Farr, president of the Kermath Manufacturing Co., Detroit, Mich., 2nd vice-president; and Afred E. Luders, president of the Luders Marine Construction Co., Stamford, Conn., 3rd vice-president.

William J. Parslow, president of the Consolidated Shipbuilding Corporation, Morris Heights, New York City, was elected to the Executive Committee, Class of 1930, to serve for the balance of the unexpired term of the late John J. Amory.

A NEW OIL SALES PUMP

Yachtsmen and motorists have long been accustomed, when they required a gasoline, to running up to a characteristic pump, with which they were familiar and which would guarantee them the kind of fuel they desired. Now the Enterprise Oil Company is inaugurating a new policy whereby their dealers and distributors will be supplied with special pumps of this nature with characteristic markings such as customers recognize on the small cans which they have been in the habit of purchasing. Many people are rather suspicious of oil offered them in an unmarked drum or bottle and those persons generally insist on one particular make and one grade of that make. In the future the Duplex user will be able to recognize his favorite oil from these standard pumps which will identify and authorize the Duplex dealer, and may purchase with a feeling of confidence.

DISTRIBUTORS NAMED

The following representatives have been appointed by the Niagara Motors Corporation of Dunkirk, N. Y., to operate under Machinery Exporters Limited, 465 California Street, San Francisco, California: Washington and Alaska, The H. G. McLaughlin Company, Western and Yesler, Seattle; British Columbia, Chappell Bros., 1779 W. Georgia Street, Vancouver; Fort Bragg, California, Coast Engineering Company; Los Angeles, California, Harbor Boat Building Company, Terminal Island, California; San Diego, California, Motor Hardware & Equipment Company, 1133 Columbia Street; New York City and vicinity, Marine Motors Incorporated, City Island, New York.

The Rapp-Huckins Company of Boston, Massachusetts, have been granted the State of Maine in addition to Massachusetts and Rhode Island.

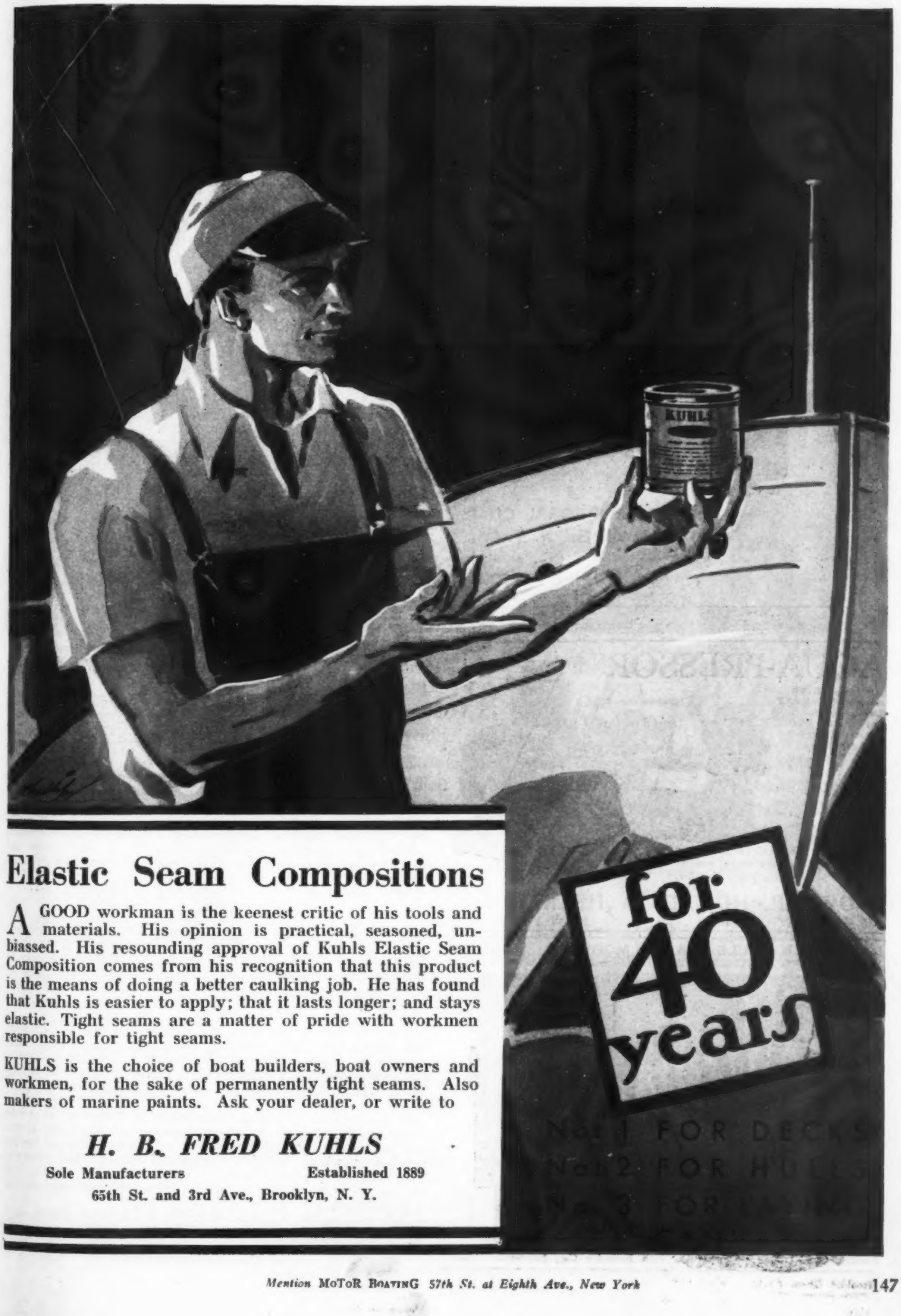
ADVENTUROUS VOYAGERS HOME AGAIN

An unusually extended and adventurous voyage has just been completed, with the arrival at Bayside, Long Island, of the 43-foot ketch Carlsark, just in from the Mediterranean. Carlsark's voyage is especially interesting when it is known that it was accomplished by three boys and that her skipper on the 13,000-mile cruise, Carl Weagant, was but 21 years old. Carlsark left last June and touched in turn Sydney, Nova Scotia, the Azores; Cadiz; Gibraltar; Cannes; Rome; Ithaca, Greece; Tunis; Algiers; Tangier; Canary Islands, Nassau; Beaufort, North Carolina and now back at Bayside. One of the members of the crew was unable to finish the voyage from Nassau so Carl's mother, Mrs. Roy Weagant served in his place on that part of the voyage.

NEW BOOKS

A number of new volumes on the sea and allied subjects are now available from the pen of a master mariner, popular author and recognized authority on the subjects with which he deals—Captain E. Armitage McCann. Captain McCann writes from a broad and varied experience that extends over a good many years, and he injects into his writings a spirit of romance and adventure that makes his work especially appealing to his readers both young and old. Some of the new titles are: The Conquest of the Sea, Romance of Ship Models, Sail Boat and Ship Seamanship, Mathematics of Navigation Simplified, Yacht and Ship Navigation, Model Yacht and Ship Building, The Use and Abuse of the Sea in Prose and Poetry, Sea Superstitions, and Sailor Talk. Persons desiring further information on these volumes may secure it by addressing Gertrude Hopkins, 55 Middagh Street, Brooklyn, N. Y.

(*Continued on page* 148)



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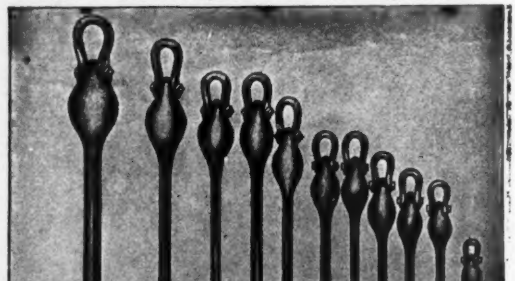


Booklet Gives Facts — Fairhaven Iron Foundry Co., Fairhaven, Mass.

YARD AND SHOP

(Continued from page 146)

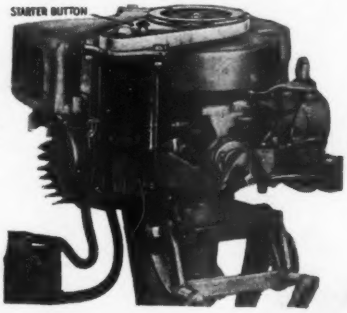
AMERICAN BOATS WIN AT POTSDAM

An interesting record of Chris-Craft winnings is contained in a cable received from Arthur Bray, Chris-Craft distributor, London, England:

"German international meeting Potsdam great victory. Seven nations competing May thirtieth. Unlimited displacement class, Bray, first; White, second. Both Chris-Craft. Unlimited racing hydroplane, Bray, second. May thirty-first, unlimited displacement boats, Bray first. Unlimited displacement boats, long distance, 37 1-2 miles, Bray. first. Unlimited racing hydroplanes, Bray first. June first, Unlimited displacement, Bray, first. Unlimited hydroplanes, Bray second. Unlimited displacement handicap, Bray, first. Speed throughout all races over 41 miles. Results, six first international trophies; three second. Bray won State of Potsdam trophy, Rupenhorn Club trophy. Plugs untouched. Revolutions averaged 2300 maximum; attained 2500. Congratulations."

SELF STARTERS FOR OUTBOARDS

Many of the standard makes of outboard motors today are regularly supplied in some models with electric starters as stock equipment but there are great numbers of older motors in use which are in very good shape and which the owner may perhaps not want to dispose of but might still desire the advantages of easy electric starting. A new item of equipment known as the Onan Electric Starter has been produced by D. W. Onan & Sons of Minneapolis, Minnesota, to meet this requirement. The Onan Starter is a small compact light-weight but powerful 6-volt starting motor that is easily attached to any of the standard makes of ootboard motors by the use of a small holding bracket and a short extension to the crankshaft. The use of this device does not interfere with rope starting in the event that the battery should be allowed to run down as the flange for rope starting is attached at the extreme head of the device. An ordinary 6-volt car battery supplies ample current to spin an engine at about 300 r.p.m. and will have sufficient life for several hundred starts without recharging the battery. Construction is very simple and the unit has been designed for easy attachment by the owner himself.



The Onan Electric Starter is designed for easy attachment to any stock outboard motor

NEW COAST PILOT

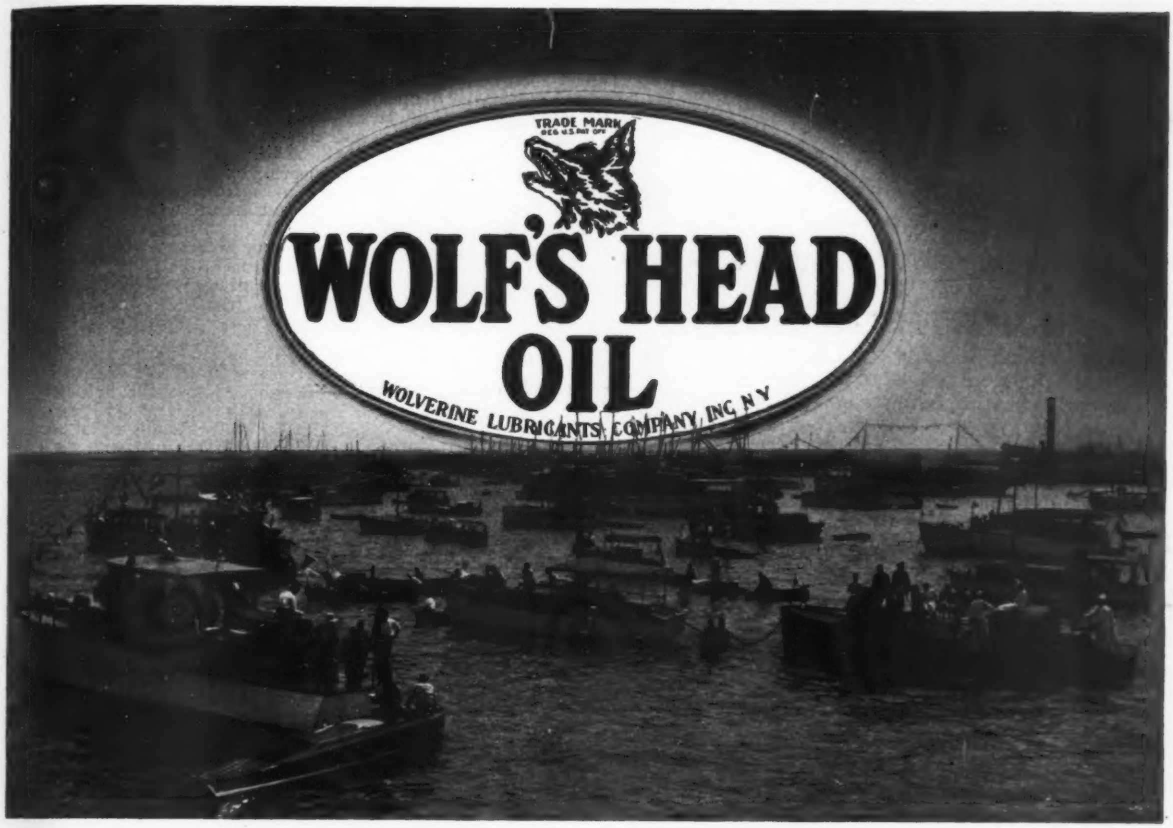
Captain R. S. Patton, Director of the U. S. Coast and Geodetic Survey, announces a new edition of the United States Coast Pilot, Sandy Hook to Cape Henry (Section C). This book, sold by the Survey and its agents for 75 cents, supplants the edition of 1924 and is a veritable mine of up-to-date hydrographic and nautical information which will be welcomed by the shipping and yachting fraternity.

The new volume describes the intricate waters of Delaware and Chesapeake Bays, including the canals from Raritan Bay to the Chesapeake, and for greater convenience to the navigator, the sailing directions of the principal routes are given in tabular form. Added features are a distance table and a list of yacht clubs.

It also contains detailed descriptions and sailing directions for the coast and harbors between Sandy Hook and Cape Henry and information on such subjects as port data, including harbor regulations, wharf facilities, repairs and supplies, and information relating to general weather conditions, radio service, and similar subjects which can not be shown conveniently on the nautical charts.

This publication is one of a series of 12 Coast Pilots, each covering a section of the coast of the United States or its offlying territories.

(Continued on page 150)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IN fleets comprising every type of motor craft you will find Wolf's Head Marine Oil preferred by owners who demand the best lubricant for their power plants. No service is too gruelling for Wolf's Head. Its Pennsylvania crude base, high viscosity, high flash test, low carbon content and freedom from impurities protect the motor against undue wear and insure maximum efficiency at all times.

For four successive years Wolf's Head won the ninety-mile Gold Cup Race in which the finest and most expensive racing boats compete. It is highly recommended by the foremost automotive engineers. Once you use this superior lubricant you will trust your motor to no other oil.

Wolf's Head Marine Oil is available in handy one gallon flat cans, five and ten gallon tins, fifteen, thirty and fifty-five gallon drums. Six grades. If your dealer cannot supply, write us.

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Yachtsmen Ahoy!

SOMETHING NEW

In publishing the Eldridge Books of Harbor Charts this year we have added to each book several "coasting" charts so that you may go from New York to Bar Harbor entirely with these books and without other charts. All the principal courses, distances, buoys, lights, fog signals and necessary information are given plainly and ready for immediate use.

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IT'S A LONG SWIM TO SHORE!

And no fun to drift all day either! A few dollars and a few minutes attaches a JONES MECHANICAL FUEL PUMP to the engine of your boat. Then you won't have to worry at all.

The JONES FUEL PUMP is so easily attached — costs so little — is so sure in operation — that wise boat owners carry one as an auxiliary for emergencies, even if their engines are already equipped with some other means of fuel supply.

It never floods — will not corrode — minimizes fire risk — ensures sufficient fuel even in roughest sea. Anyone can attach it to *any* engine. None other like it made! Good dealer proposition.

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YARD AND SHOP

(*Continued from page* 148)

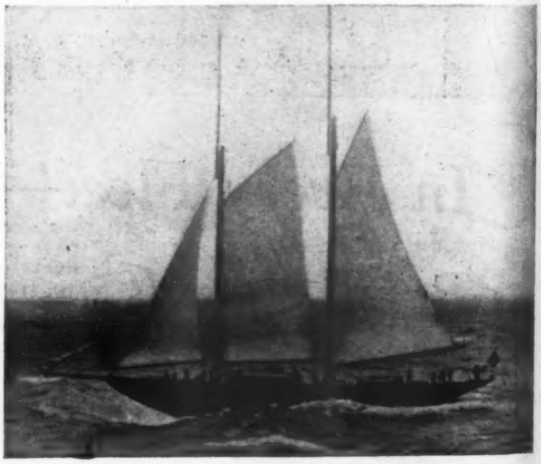
RED BANK Y. C. TO HOLD MARINE BALL

The sponsors of the Gold Cup Regatta will hold their second annual Marine Ball at the recently opened Hotel Molly Pitcher at Red Bank, New Jersey, on Saturday evening, June 14. The ballroom of the hotel and the spacious patio overlooking the North Shrewsbury River will be attractively decorated with code flags, yacht club burgees and marine lights. The hotel dock and float will be brilliantly lighted and attendants dressed as sailors will be in attendance to assist guests ashore who arrive in speed boats and yachts.

Alan Woolley's Yacht Club 8-piece orchestra will furnish the music and a supper will be served at midnight. The Yacht Club Entertainment Committee in charge of the festivities is headed by Fleet Captain Thomas B. Crews, Jr.

WHAT ONE OWNER THINKS

Commodore K. T. Hotchkiss, Beaumont, Texas, is shown in the accompanying illustration operating his 27-foot Meteor runabout and putting the craft through various stunts in waters at Beaumont, Texas. In a letter Commodore Hotchkiss says the Meteor has stood up wonderfully in twelve-months-a-year service on the Gulf Coast and he is absolutely satisfied with the performance of the boat. Out in all kinds of wind and weather the Meteor stands the gaff in fresh and salt water and since he put the boat into commission he has bought two new spark plugs and a propeller, which he fouled on a river trip. As commodore of the Beaumont Yacht Club, Mr. Hotchkiss has been asked to try out all makes of boats and for stability, ease of operation, speed and general performance, he states that the Meteor is an excellent craft. Commodore Hotchkiss' endorsement of the Meteor runabout it about as comprehensive a statement of complete satisfaction of a motor boat as any user could write and the views reveal the neat appearance of the trim runabout, how sharply it banks, turning in a length and a half at full speed of thirty miles an hour.



Etak, photographed in mid-ocean. Her two Hill-Diesel engines functioned perfectly whenever called upon

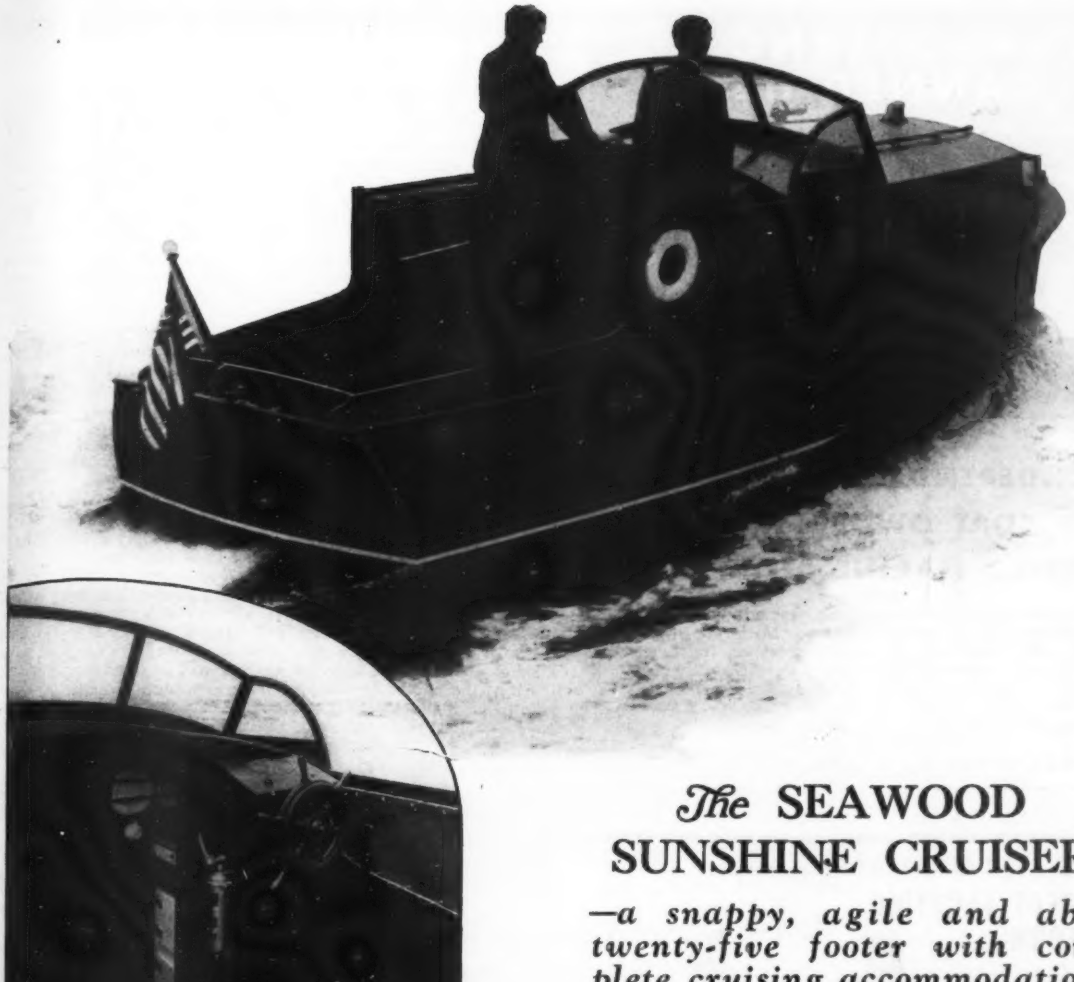
SCHOONER, BUILT ABROAD, DELIVERED HERE

The diesel auxiliary schooner Etak which was designed by Cox & Stevens, Inc., for Walter G. Ladd of the New York Yacht Club, has just arrived from her builder's yard at Kiel, Germany.

Captain Elsted reports Etak had a very rough passage, weathering two full gales on the way. An interesting incident of the voyage was the passing of the Hamburg-American Line Steamship Hamburg on May 24. Bruno Tornroth of the firm of Cox & Stevens was on board this steamer and arranged with the captain to pass close to Etak and they passed so close that many of the passengers thought they would cut the yacht in two, and there was some loud screaming by the women passengers as the boats almost touched each other, and Etak did some wild pitching in the wake of the steamer.

Etak is 134 feet overall and carries a crew of twenty men. She will be used by Mr. Ladd for cruising along the New England coast this summer, making her headquarters at Bar Harbor, Maine.

(*Continued on page* 152)



Above: View of bridge showing helmsman's position, handy control for built-in fire extinguishing system and a glimpse of the galley.

Below: Looking forward in cabin. Note full length and wide berths.

The SEAWOOD SUNSHINE CRUISER

—a snappy, agile and able twenty-five footer with complete cruising accommodations plus speed and absolute safety

YOUR ideal cruiser is now a reality—a sporty twenty-five footer, embracing the comforts and protection of a cruiser in addition to the exhilaration and speed of a rakish runabout. Whether you are a fishing devotee, a lover of fast travel on the glistening water, or cruising enthusiast indulging in extended trips, you will find the SEAWOOD SUNSHINE Cruiser fully meets not only your particular needs, but the other requirements equally well, and best of all, at a price comparable to a good quality runabout of equal length.

If you act promptly we will be pleased to arrange for demonstration—by appointment only. Reservations for late summer and Southern fall deliveries are rapidly consuming our present production capacity. Avoid disappointment by placing your order now.

Other Seawood Cruisers in twenty-eight and thirty-two foot lengths available.

Write today for further information

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Does away with all wicks, priming cups and liquid fuel. Uses Sterno Canned Heat. *Does not liquefy. Burns solid.* Absolutely safe in roughest weather. Insurance officials say it reduces fire risk to minimum. Sturdily constructed. Enameled to prevent rusting. Size, two burner as illustrated, 19¾" x 10" x 10". Retail price, two burner, $10.00. See it at your dealer's today or address—

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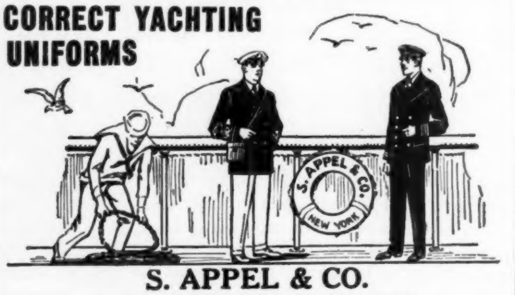

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THE FIFTEENTH CUP MATCH

(*Continued from page 72*)

The general technical details of these four boats are: Weetamoe, 125 feet overall in length with a water line of 83 feet and a draft of 15 feet. She has a displacement of 143 tons and carries 7,560 square feet of sail on a mast 164 feet in height. Yankee is slightly larger, being 126 feet overall with the same water line length of 83 feet. She displaces 148 tons and carries 7,550 square feet of sail on 162-foot mast. Whirlwind is the largest of the boats and is 130 feet long with a waterline length of 86 feet. She also has the deepest draft, 15 feet 6 inches, and displaces 158 tons and carries 7,550 feet of sail on a 166-foot mast. Enterprise, the fourth of the American boats, is 120 feet 9 inches in length and only 80 feet on the waterline. She has a foot less draft than Whirlwind and displaces 128 tons, the least of all five boats. Her sail area, on the other hand, is the greatest, being 7,583 square feet on a mast 168 feet tall. Against these figures the similar dimensions for Shamrock V are interesting. She has a length of 119 feet 10 inches with a waterline length of 81 feet 1 inch. Her draft is slightly less than the average American boats, being 14 feet 8 inches, while her displacement is 134 tons. Her sail area is 7,540 feet and while the exact height of her stick is not known it will be closely similar to that of the others.

The opinion of experts seems to indicate that Shamrock V has been designed as particularly well suited to the conditions likely to be found during the contests. She is probably a better light weather boat than some of the earlier ones while two of the new American boats can be considered as heavy weather craft. While the choice of the American defender has not yet been made, these factors will no doubt have a considerable bearing on the ultimate result. The weather will have a good deal to do with the final outcome of the new series and one man's guess is as good as another as to how the weather will be during September.

All of the five boats this year have been built around the same rule to meet the identical conditions. This to some extent controls the dimensions and weights of the boats since they all employ Lloyd's rules for the sizes of scantlings. In some cases a little leeway has been allowed so that the water line can be varied by the addition of ballast so that advantage can be taken from the experience gained in the trials by adjusting the waterline to give the most effective balance between the sail area and the lateral plane of the boat. In the case of both Weetamoe and Enterprise a small centerboard has been fitted into the keel construction as a possible aid in windward work. Enterprise, in addition, has another small triangular board which will be a further help. Yankee has a small auxiliary centerboard which will function less as a centerboard but rather as an aid in steering. The characteristics which have made the boats of each designer successful have been embodied in these new boats also. Weetamoe and Yankee have the lines of the keel and stem practically straight. Whirlwind and Enterprise have a straighter keel which rises as it sweeps forward and upward with concaves at the waterline. Shamrock V might be considered to be closely similar to Enterprise in general shape of the underbody.

There are many points of difference in dimension and design while the construction of all with the exception of Whirlwind is generally similar. Whirlwind is of a composite build with metal frames and wooden planking. The others are all fitted with steel frames and bronze plating. All use a solid lead casting for the keel weighing many tons which serves to keep them properly trimmed.

Of exceptional interest are the tall spars necessary to carry the enormous spread of sail which these boats use. These are all from 162 to 168 feet in length and the problem of making and stepping a mast of these dimensions is a most difficult one. They are all built up and both wood and metal is used for this. The wooden spars are built up of layer after layer of selected timber which is left hollow on the inside and stream lined on the outside. The metal spars are also built up and generally of special alloys to reduce weight and at the same time provide the necessary strength and rigidity required of these members. The spars, which are elliptical in shape, measure about 24 by 18 inches at the base and in the case of the wooden masts the shells are finished to a thickness of about 3 inches. An innovation in handling boats of this kind is the method of leading halyards down through the hollow mast below decks where the crew stand by to haul or slack away as required. This has the decided advantage of reducing the wind resistance since there will be no exposed bodies to interfere with the flow of the air stream.

The general details of Shamrock's construction are not greatly different from those of the American boats. She was built to the same rules and has been planked with mahogany 2 1-4 inches thick. She also is of the composite type with a substantial steel frame. Her centerboard is a novel arrangement of the dagger type and is constructed of teak ballasted with lead.

(*Continued on page* 154)

96.270 Miles per Hour

The Fastest Time Ever Made on Water

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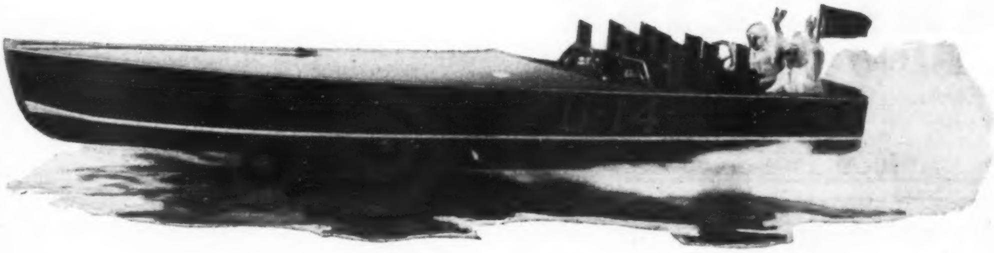
This is the Speed Made at Miami by

MISS AMERICA VIII

Designed, Built and Driven by Gar Wood



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EAST HARTFORD, CONN.

THE FIFTEENTH CUP MATCH

(*Continued from page* 152)

The contests this year will, without a doubt, attract an enormous fleet of spectator yachts which will journey to the general vicinity of Newport, Rhode Island, and follow the racers about the course each day. A special starting buoy has been located out in the Atlantic and placed nine miles southeast of Brenton Reef Light Vessel. The chart which accompanies this article has drawn upon it the location of this buoy and radiating from it in all directions are the possible courses which may be used on any day. It will be noted that there are a series of triangular courses which are ten nautical miles on a side and also a longer series of lines fifteen nautical miles in length which will be used for the windward and leeward courses. The official choice of the course to be followed on any of the days of the series will be made by the Race Committee as early in the day as possible and the signals indicating the course flown from the Committee Boat. The first, third, fifth, and seventh races will be over one of the thirty-mile triangles, while the second, fourth, and sixth race will be one of the straight out and return courses, also of thirty miles length.

The problem of finding suitable harbors for the large fleet of visitors will not be a difficult one since this area is the most notable and attractive cruising area in New England. Newport will be the center of attraction as it will be the base of the official New York Yacht Club fleet and some of the contesting yachts. The center of social activities will also be in this city and the largest fleet of yachts will no doubt spend their nights there. Others may prefer to visit Block Island to the westward of the race course, while on the mainland the Point Judith Harbor of Refuge will, without a question, be a convenient place for boats to lay over, particularly if the weather gets bad and a longer run to harbor is inexpedient. Narragansett Bay provides abundant space for thousands of visitors and while they may not all be able to get as close to the city of Newport as they might like there is still abundant room and safe harbor close by.

Almost directly north of the starting line is the Sakonnet River which has numerous protected coves with good holding ground for the anchors of the visitors. The city of Fall River is only a few miles up this river and Mount Hope Bay near by should furnish an excellent anchorage. No doubt special provision will be made for supplies, water, ice and fuel for the large fleet of visitors at all places along shore so that no difficulty will be experienced in this direction. To the northeast we have the enormous area of Buzzards Bay with its many coves and harbors. New Bedford and Mattapoisett are perhaps the best known on the mainland while the several islands between this and Martha's Vineyard will also provide attractive anchorage and interesting places to visit. Vineyard Sound and Martha's Vineyard will also be protected in the case of any southerly storms so that the visitor will be secure under all conditions.

The starting buoy is about 155 miles from Governors Island, New York, and about 115 miles from Boston, via the Cape Cod Canal. U. S. Coast & Geodetic Survey Chart No. 1210 will give many details of the harbors and danger points in this area. Detail charts of the more important harbors have also been prepared so that the visitor to this race should provide himself with the latest information in order to be certain of his navigation and position at all times while in this region.

LIGHTHOUSE SERVICE PREPARES

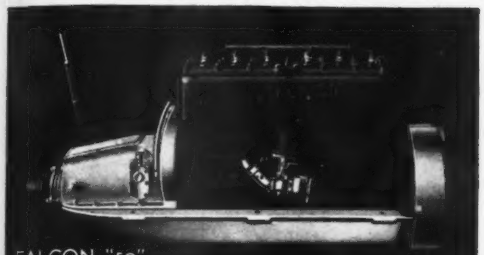
(*Continued from page* 45)

As he noses into the home float, with a bit of paint washed off by rough water, and the ship-shape appearance which comes only of extended cruising, he is the envy of his fellows. The well-thumbed light list and the dirty charts establish his reputation as a blue-water sailor, and will furnish the material for many a yarn during the winter to come.

For those who would welcome a more intimate acquaintance with the personnel of the Lighthouse Service and the many different types of aids with which the coastal waters are dotted, it is suggested that a visit be paid one of the Lighthouse Depots, nineteen of which are located along the coast, the Great Lakes, and the more important navigable rivers.

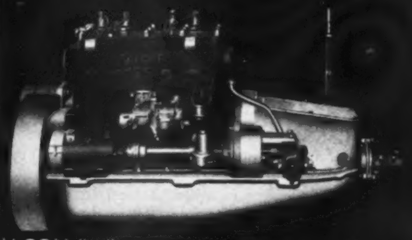
The publications of the Lighthouse Service are available to mariners at nominal charge. In addition to the three large volumes listing the lighted aids of the Atlantic coast, the Pacific coast, and the Great Lakes, there are a number of supplementary local light and buoy lists. Each supplementary light list covers a certain limited portion of the coastal and inland waters, and is handier than the bulky general lists where very extensive cruising is not contemplated. The Lighthouse Service also publishes weekly Notices to Mariners, containing information relative to all proposed changes in aids to navigation. Such notices are available without charge on written request, and should be posted in every yacht club or boat house.

"SEEING IS BELIEVING"



FALCON "50"

FALCON "40"

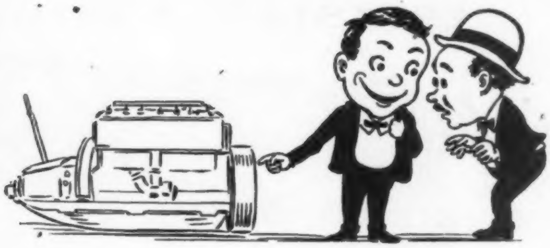


FALCON "25"

FALCON "5"

"FALCON" SERIES

50 H. P. "Six"
40 H. P. "Four"
25 H. P. "Four"
15 H. P. "Four"
10 H. P. "Twin"
5 H. P. "Single"



ANY motor can run "wonderful" and "amazing" on paper. But when it comes to the final show-down of *actual performance*, it's a different story.

Mark this: During the month of May a number of individual boatmen (11 to be exact) came to Oshkosh in person to select their motors right at the factories. Every one of these men—after having seen the smooth-running operation of FALCON engines—placed orders for the FALCON. There were no exceptions. FALCON performance won in every instance.

We cite this case not because of any importance attached to the sale of 11 motors, but merely because each of these sales was made when actual demonstration counted everything and claims nothing.

So — before you lay down your cold cash for a new engine — familiarize yourself with the characteristics of smoothness, stamina and power which distinguish the FALCON Series from all other motors.

It will save you money to start with and assure you a source of supreme motor boating satisfaction during the years to come.

The same holds true with U. S. super-smooth Electric Plants. Both lines we manufacture are backed by the same policy that "U. S. products must give service." Write for literature and prices.

U. S. super-smooth Electric Plants

Most complete line of marine electric plants ranging from 350 watts to 15 K.W. in 12, 32, and 110 volts.

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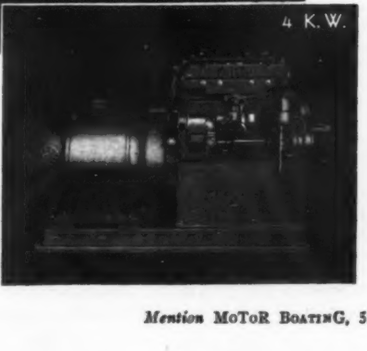

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Established 1890

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SALES AND SERVICE AGENTS IN PRINCIPAL CITIES—
WRITE FOR NAME OF ONE NEAREST YOU
"It Costs Less to Build Better Boats in Maine"

HISTORY OF AMERICA'S CUP RACES

Date	Course	American	Corrested Time H.M.S.	English	Corrected Time H.M.S.	The Finish M. S.
Aug. 22, 1851	Around Isle of Wight	America	10:37.00	Aurora	10:45.00	American boat first home by 8.00.
Aug. 8, 1870	New York Y. C. course	Magic	3.58.26	Cambria	4.37.38	American boat won by 39.12.
Oct. 16, 1871	New York Y. C. course	Columbia	6.19.41	Livonia	6.46.45	American boat won by 27.04.
Oct. 18, 1871	15 m. windward and back	Columbia	3.07.42	Livonia	3.18.15½	American boat won by 10.33¾.
Oct. 19, 1871	New York Y. C. course	*Columbia	4.17.35	Livonia	4.02.25	*English boat won by 15.10.
Oct. 21, 1871	20 m. windward and back	Sappho	5.36.02	Livonia	6.09.23	American boat won by 33.21.
Oct. 23, 1871	New York Y. C. course	Sappho	4.46.17	Livonia	5.11.44	American boat won by 25.27.
Aug. 11, 1876	New York Y. C. course	Madeleine	5.23.54	Countess of Dufferin	5.34.53	American boat won by 10.59.
Aug. 12, 1876	20 m. windward and back	Madeleine	7.18.46	Countessof Dufferin	7.46.00	American boat won by 27.14.
Nov. 9, 1881	New York Y. C. course	Mischief	4.17.09	Atalanta	4.45.29¼	American boat won by 28.20¼.
Nov. 10, 1881	16 m. leeward and back	Mischief	4.54.53	Atalanta	5.33.47	American boat won by 38.54.
Sept. 14, 1885	New York Y. C. course	Puritan	6.06.05	Genesta	6.22.24	American boat won by 16.19.
Sept. 16, 1885	20 m. leeward and back	Puritan	5.03.14	Genesta	5.04.52	American boat won by 1.38.
Sept. 9, 1886	New Yory Y. C. course	Mayflower	5.26.41	Galatea	5.38.43	American boat won by 12.02.
Sept. 11, 1886	20 m. leeward and back	Mayflower	6.49.00	Galatea	7.18.09	American boat won by 29.09.
Sept. 27, 1887	New York Y. C. course	Volunteer	4.53.18	Thistle	5.12.41¾	American boat won by 19.23¼.
Sept. 30, 1887	20 m. windward and back	Volunteer	5.42.56¼	Thistle	5.54.45	American boat won by 11.48¾.
Oct. 7, 1893	15 m windward and back	Vigilant	4.05.47	Valkyrie II	4.11.35	American boat won by 5.48.
Oct. 9, 1893	30 m. triangular course	Vigilant	3.25.01	Valkyrie II	3.35.36	American boat won by 10.35.
Oct. 13, 1893	15 m windward and back	Vigilant	3.24.39	Valkyrie II	3.25.19	American boat won by 0.40.
Sept. 7, 1895	15 m windward and back	Defender	4.59.55	Valkyrie III	5.08.44	American boat won by 8.49.
Sept. 10, 1895	30 m. triangular course	Defender	3.55.56	Valkyrie III	†3.55.09	American boat won on foul.
Sept. 12, 1895	15 m leeward and back	Defender	4.43.43	Valkyrie III	withdrew	American boat had walk over.
Oct. 16, 1899	15 m windward and back	Columbia	4.53.53	Shamrock I	5.04.07	American boat won by 10.08.
Oct. 17, 1899	30 m. triangular course	Columbia	3.37.00	Shamrock 1	disabled	American boat had walk over.
Oct. 20, 1899	15 m leeward and back	Columbia	3.38.09	Shamrock I	3.44.43	American boat won by 6.34.
Sept. 28, 1901	15 m windward and back	Columbia	4.30.24	Shamrock II	4.31.44	American boat won by 1.20.
Oct. 3, 1901	30 m. triangular course	Columbia	3.12.35	Shamrock II	3.16.10	American boat won by 3.35.
Oct. 4, 1901	15 m leeward and back	Columbia	4.32.57	Shamrock II	4.33.38	‡American boat won by 0.41.
Aug. 22, 1903	15 m windward and back	Reliance	3.32.17	Shamrock III	3.39.20	American boat won by 7.03.
Aug. 25, 1903	30 m. triangular course	Reliance	3.14.54	Shamrock III	3.16.12	American boat won by 1.19.
Sept. 3, 1903	15 m leeward and back	Reliance	4.28.00	Shamrock III	.....	English boat lost in fog.
July 15, 1920	15 m. windward and back	Resolute	disabled	Shamrock IV	4.24.58	English boat had walk over.
July 20, 1920	30 m. triangular course	Resolute	5.24.44	Shamrock IV	5.22.18	English boat won by 2.26.
July 21, 1920	15 m. windward and back	Resolute	3.56.05	Shamrock IV	4.03.06	American boat won by 7.01.
July 23, 1920	30 m. triangular course	Resolute	3.31.12	Shamrock IV	3.41.10	American boat won by 9.58.
July 27, 1920	15 m. windward and back	Resolute	5.28.35	Shamrock IV	5.48.20	American boat won by 19.45.

*Columbia finished disabled.   †Defender won on a foul.   ‡Columbia won on time allowance.

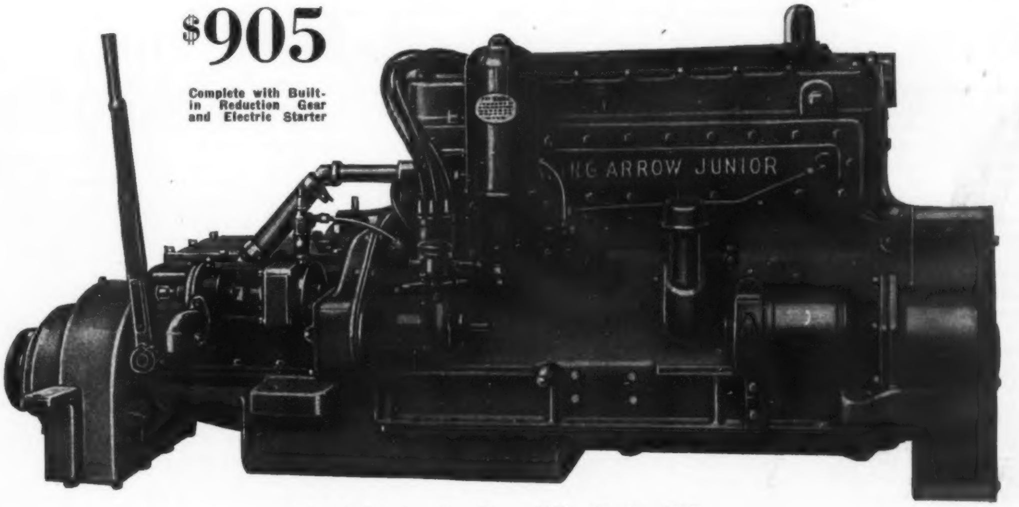
Advertising index will be found on 3rd last page

Red Wing Thorobred
THE MOTOR WITH POWER TO SPARE

6-Cyl. ARROW JUNIOR 35-70 hp.
WITH BUILT-IN 2 TO 1 REDUCTION GEAR

$905

Complete with Built-in Reduction Gear and Electric Starter



6-cylinder, 4-cycle. Bore, 3⅜". Stroke, 4¾"

For Utilizing the Fine Power of this Wonderful Motor at its Higher Engine Speeds in

CRUISERS — WORK BOATS — LARGE AUXILIARIES

Reduction gear in this unit is the famous Morse gear, especially designed and built for the "Arrow Junior" with special housing of great compactness and strength, water jacketed for cooling in conjunction with engine cooling system. Built as a rigid unit with reduction gear hangers lined up with engine supports both as to width and height. The gears are especially quiet running, and operate in oil. Bearings are extra large, and adequate thrust bearings are also built-in. Extra heavy reverse gear is provided. *A powerplant of supreme smoothness, quality and endurance.*

SPECIFICATIONS, REDUCTION GEAR UNIT

Overall length	57¼"	Installing width	16¼"
Height above crank center	20"	Oil pan depth	6¼"
Weight, iron base	900 lbs.	Weight, aluminum	800 lbs.

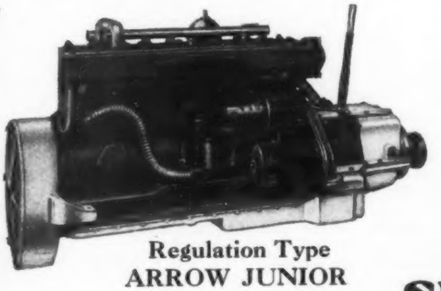
Normal revolutions .... 1400 to 2200

Reduction gear shaft line 1½" below crankshaft center.

Ratio of reduction 2 to 1 only. Furnished in grey iron or aluminum base, and in twin screw pairs.

Price, aluminum base type $935.00

Extra for twin arrangement $50.00



Regulation Type
ARROW JUNIOR

This motor is also supplied without the built-in reduction gear, and offers a smooth, high-speed six of remarkable stamina and durability, for fast runabout or cruiser of racy lines. One of the greatest marine values on the market at $780, with aluminum base, and $730 for the same, with grey iron base.

RED WING MOTOR CO.
RED WING, MINNESOTA, U. S. A.

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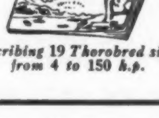

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The Reference Book Which Combines the Important Data to Be Found in All Government Publications of Interest to Motor Boatmen and Yachtsmen Into One Volume

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*Notes about Government Coast and Geodetic Charts
*Where to buy Government charts
*Cruising to Florida in twenty days
*Racing Summary
*How to form a yacht club
*Duties of yacht club officers and members
Tables of times of high and low tides
*Tables showing time of sunrise and sunset
*Details of motor boat routes, New York to Albany, Albany to Buffalo, Albany to Thousand Islands, Albany to the St. Lawrence River and Montreal, New York to Philadelphia, Buffalo to Detroit, Miami, Fla., to New Orleans, etc., etc.
*Motor Boatmen's Charts of Lake Ontario, Lake Erie, Lake Huron, Lake Michigan, etc.
*Numbering Law—How to obtain numbers for your boat
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Tide commutation table
Anchorage rules—Port of Boston
Port of New York—Anchorage rules
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Complete sailing directions (79 pages), entire Atlantic Coast, Maine to Gulf of Mexico. Detailed information on coastwise navigation, as well as complete instructions for getting into all harbors, bays, sounds, rivers, etc. Compass directions, distances, descriptions and locations of shoals, rocks and other dangers to navigation. The waters described in detail include Atlantic Coast, Coast of Maine and all harbors and rivers. New Hampshire, Portsmouth Harbor, Massachusetts and all of its principal harbors; Massachusetts Bay, North, South and West shores Cape Cod Canal, Cape Cod to New York, Buzzards and Narragansett Bays and Long Island Sound, including motor boat and yacht harbors, anchorages and tributary rivers. East River to New York City, South Shore of Long Island, New York Bay and Harbor, Coast of New Jersey, Hudson River, Chesapeake Bay, Delaware River and Bay, Hampton Roads and all tributary waters, Potomac River, Inside Route—New York to Florida.
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Four Cycle
16 Valves

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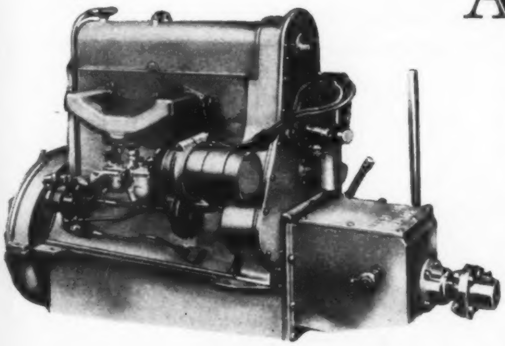

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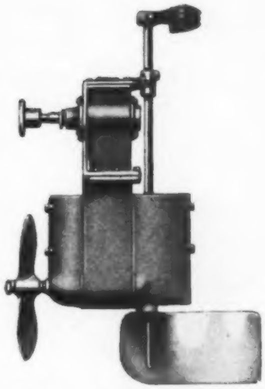

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$390. ***Complete including electric starter, generator and reverse gear. Weight complete 165 pounds.***

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In use for a year—all experiments over. Silent because no gears—silent chain drive. Over 200 in service. More than all other stern drives combined. Price $100 complete with rudder and propeller.

Van Blerck Junior can now be had in your choice of the following boats

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What are *You* Doing To Reach These Boat Buyers?

The Main Sheet
11th Annual
International Regatta

DETROIT is the largest market for boats west of New York. Concentrated into a small area with the Detroit Yacht Club, its focal point, the buying resources of this group can be tapped more easily, more economically, and more effectively through the D. Y. C. "MAIN SHEET" than in any other manner. Normally, a circulation of 4,000 is offered you, consisting of yacht club members who are already boat minded. At the Harmsworth Regatta, the "MAIN SHEET," serving as the official program of the Regatta, will have a guaranteed circulation of 18,000. Beautifully printed, informative, comprehensive and well illustrated, your advertising message has a life, not of days, or weeks, but of months and even years among men who are your real and potential market. Write for details today. Closing date on Regatta Number, August 10th.

The Main Sheet

5-216 General Motors Building
DETROIT MICHIGAN
W. D. Edenburn, Editor

Outboard MOTOR BOATING

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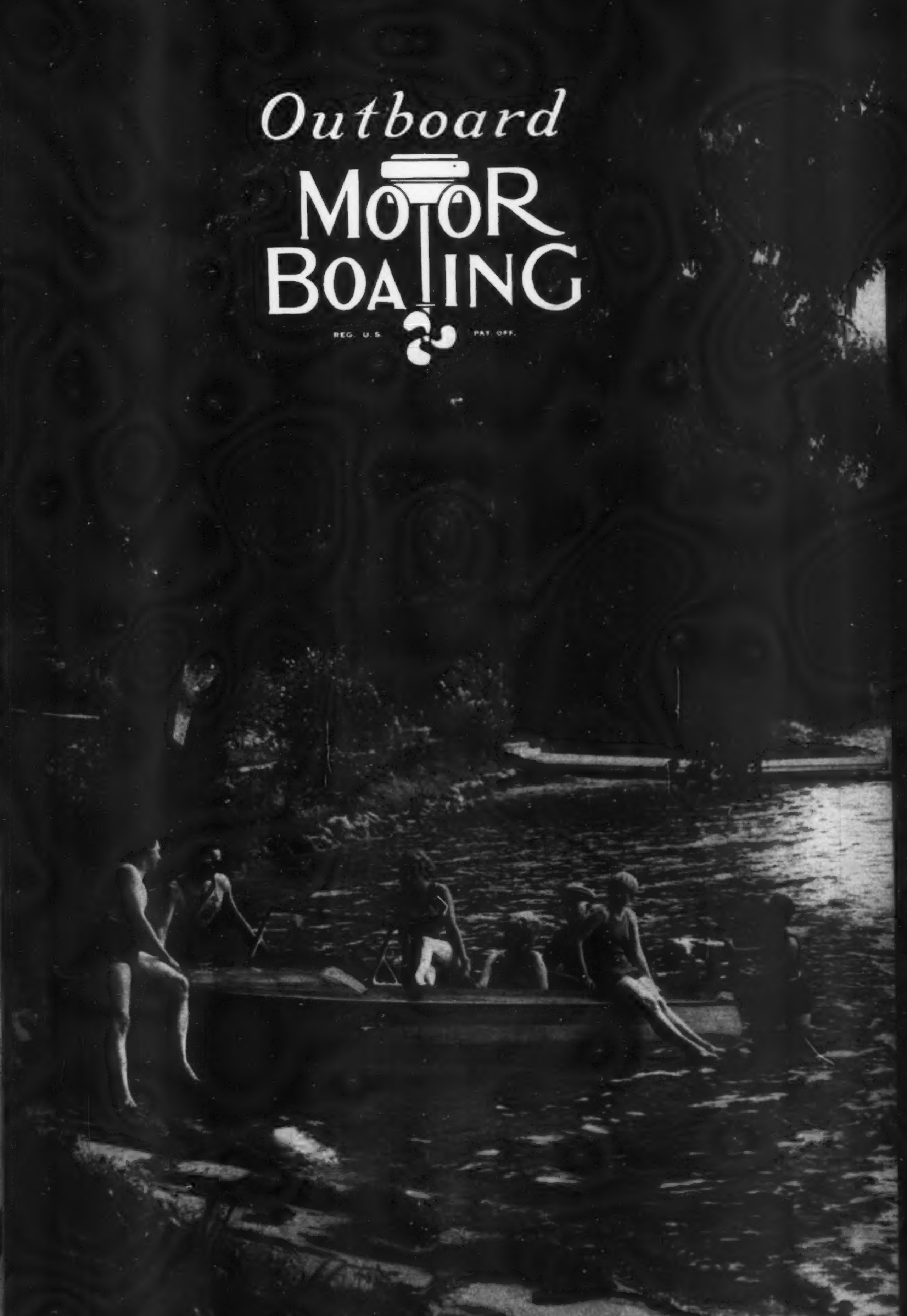

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AMERICA'S FINEST MARINE MOTOR OIL

Measured By All Standards of Comparison, Gulfpride Oils Demonstrate Their Superiority

SECURE
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Outboard MoToR BoatinG

FIFTY-SEVENTH ST. AT EIGHTH AVE.,
NEW YORK, N. Y.

Edited by
CHARLES F. CHAPMAN

JULY, 1930

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MAINE REGATTA CIRCUIT

When the starting flag drops for the first race in the Portland, Maine, regatta, July 18, something new and unique in outboard racing schedules will become a reality. Maine, this year, has so arranged its regatta dates and outboard events that five days of racing are afforded within a nine-day period covering two consecutive week-ends.

This schedule, which has been termed the Maine Regatta Circuit, was made possible through the fine spirit of co-operation that exists between the Portland, Lake Cobbosseecontee and Camden committees, and judging from the many entries already received it has met with enthusiastic support from outboard drivers throughout the East.

Portland starts the schedule with two days of racing, July 18 and 19. From Portland, drivers may go to Lake Cobbosseecontee, a distance of approximately 50 miles, and race again on Tuesday, July 22. Following Cobbosseecontee, comes Camden, about two hours away, with another two-day schedule, July 25 and 26.

The three committees sponsoring the Maine Regatta Circuit have agreed upon the same schedule of outboard events at all three places, including all four classes in the four divisions, with additional special events to meet local conditions.

The prize list includes trophies and cash awards to the value of approximately $5,000 and, in addition, a special trophy to be awarded to the amateur outboard driver scoring the highest number of points in the three regattas comprising the Maine Circuit.

Drivers who have attended Portland regattas in the past know that its landlocked course is not surpassed on the Atlantic Coast. The Cobbosseecontee course is famous for its smooth water and has contributed two American outboard records in past years. Camden offers a one-mile oval that affords good racing conditions in any average weather.

Drivers who attended the Camden regatta last year were loud in their praise of the manner in which the races were handled and the entertainment features and hospitality showered on them by the Camden committee.

The beautiful yacht, Lyndonia, owned by Cyrus H. K. Curtis, serves as committee boat during the races at Camden and the attractive Yacht Club, which Mr. Curtis donated to the town, is the scene of the entertainment features held in connection with the annual Camden regatta.

So far as is known these Maine communities are pioneers in the coordination of regatta dates and outboard schedules which make it possible for drivers to compete in several regattas in the same locality within a period covering two week-ends.

Each of the three regattas in the Maine Circuit will be run under the American Power Boat Association sanction and it is hoped to have the same group of A. P. B. A. officials in charge of racing throughout the Circuit.

This AC Tachometer is remarkably accurate, registering 0 to 8000 R. P. M.

This New AC
TACHOMETER
Now $20.00

Just what you want for your outboard engine

Here it is, a new and improved AC Tachometer for outboard engines. Although the quality has been improved, this precision instrument is now offered at a new low price.

Its improved features include the following:

Aluminum frame insures lightness, greater strength, better bearing surface for drive shaft.

Shaft has the standard S. A. E. connection.

Nickeled pilot pin and hardened drive nut jaws prevent breakage or corrosion.

Snap ring prevents drive adapter from jumping off drive pin in rough water.

Soft threads in drive nut prevent damage to threads on flywheel shaft.

Among the waterproof features are live rubber gasket in front and rear of case, fibre gasket between case and frame, live rubber sleeve encasing shaft at head, waterproof casing of shaft.

This *new and improved* tachometer is now priced at $20 complete, slightly higher in Canada. Write for descriptive folder and in so doing kindly mention name of your nearest dealer.

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Birmingham
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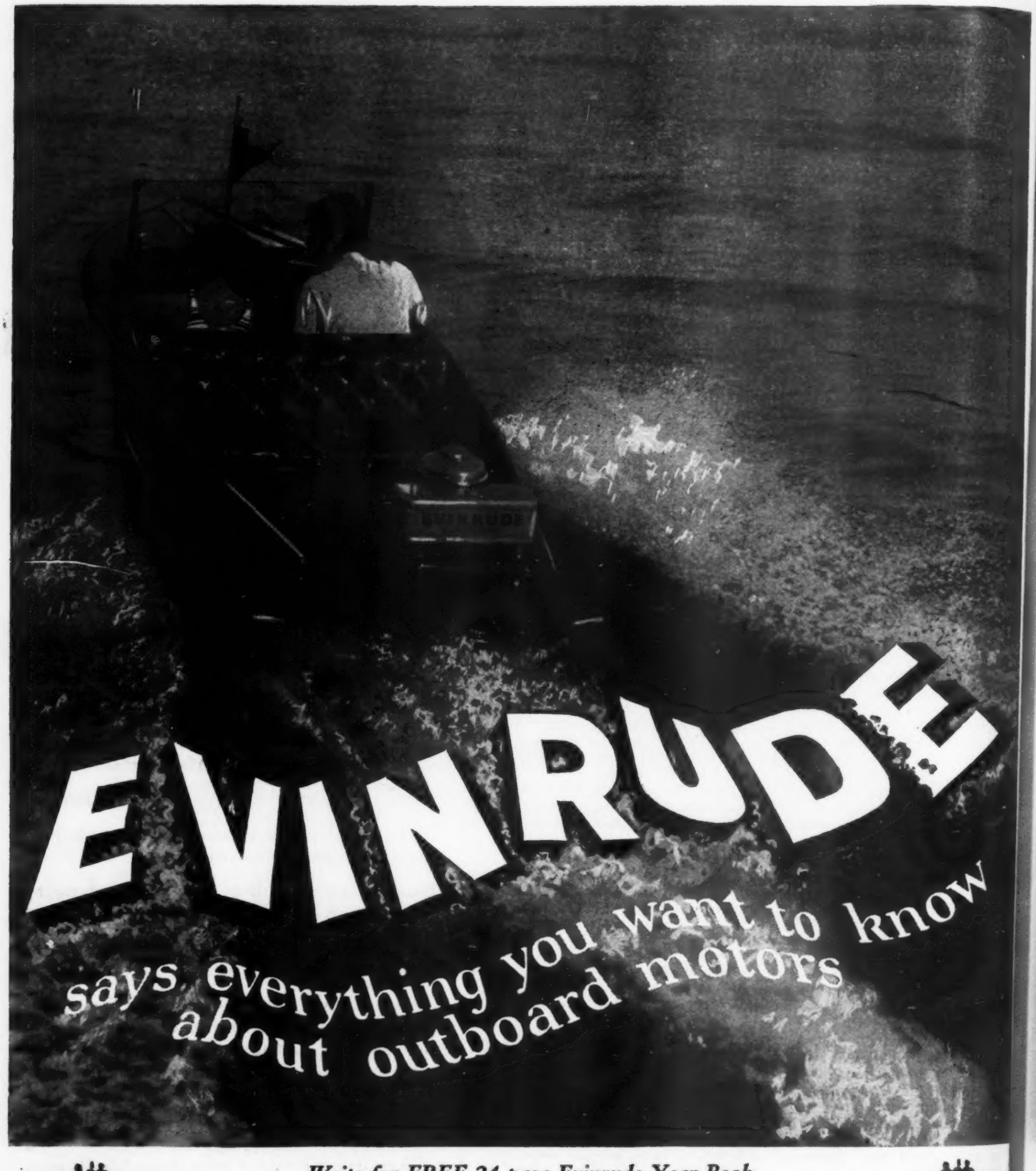
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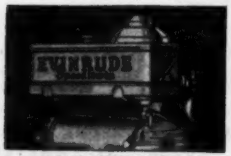
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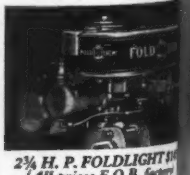
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Advertising index will be found on 3rd last page

Miss Hilda Mueller, who with Mrs. M. Hickey, defended feminine honors against many competitors at Lake Quinsigamund

WORCESTER REPEATS RECORD SMASHING

Third Series of Outboard Events on Lake Quinsigamund Breaks Several Five-Mile Competitive Records and Sets Eight New Mile Trial Marks

ONCE again the much abused expression, Records Smashed, comes in for considerable service as a result of the events at the third outboard motor boat regatta on Lake Quinsigamund, Massachusetts. This year the recently formed Worcester County Motor Boat Club under the able leadership of Commodore T. Frank Hickey took over the reins of the regatta and succeeded in holding one of the finest and best conducted race meets in New England. The Decoration Day holiday was selected as the most suitable time for this race meet as in previous years, and elaborate plans had been made to run the many events of a busy program through two days on May 29 and 30.

A meeting of the National Outboard Racing Commission in Chicago the day before the regatta had modified the racing rules, particularly as they applied to Division III drivers so that it was decided to continue the racing programe for still a third day and conduct further mile trials to afford an opportunity for some of these drivers in Division III to try their hand at setting records in this division.

There is probably no body of water which is quite as fast for outboard purposes as Lake Quinsigamund. It lies between sheltering hills and is thoroughly protected from all sides. The slight wind which disturbed its smooth surface was just of the right intensity to ripple the surface and cause the speedy little hydroplanes to travel on the tips of their steps. Unfortunately, the weather during the several days of the regatta was not of the choicest and a very severe shower during the running of the events on Thursday afternoon did its best to upset the program. It was decided to carry the program through, even though the thousands of spectators had fled from their observation points, and the contestants and officials alone remained on the scene. A canvas shelter had been erected over the judges barge but its usefulness was limited to keeping the sun off. As a protection against the rain it might just as well have been taken away as the rain poured through it without any resistance whatever. Those of the officials who remembered the conditions in the previous year when they were thoroughly baked in the hot sun, averaged the score this year by shivering and wishing for their overcoats. The drivers who ran through the severe rain storm can only be commended for their hardihood and endurance. It is surprising that the boats did not fill up in their course around the lake. The timers and scorers also had their troubles as it was difficult to protect delicate stopwatches and chronometers from the rain and the task of writing results on saturated score sheets can well be imagined.

Norman W. Kalat who established a Division II mile record of 27.135 m.p.h. with a Lockwood Class A engine

An innovation at this regatta was the use of a public address system with microphones on the judges barge and loud speakers at points where the largest gathering of spectators occurred. By means of this device the thousands of spectators were continually informed as to the happenings of the day, the event being run, the position of the leaders and other pertinent information concerning the race. Between times music was supplied and altogether this practice is one which could be much more freely adopted by race committees everywhere.

While the course used for the regatta was the same one used in previous years, it was decided to check its accuracy by means of the new mechanical surveyor presented to the American Power Boat Association by Commodore H. B. Greening. The device was taken over the course in a 16-foot Dodge runabout, operated by Frank Wigglesworth, while the surveyor of the Association, F. W. Horenburger controlled the instrument. It was found that the course was exactly correct as closely as could be measured within the limits of accuracy of the instrument. This consists of a reel of very fine wire which is paid out and registered by means of a wheel which counts the number of yards. The course used for the mile trials checked within a single yard while the two and one-half mile circuit was also found to be most precise.

The sociable side of the regatta was also ably looked after and all contestants were provided with fuel and oil without cost to them. A clam-bake was provided for officials and contestants at Tahassit Lodge on the opposite side of the lake and this was a much enjoyed feature particularly on the part of those who live away from salt water where sea food is not the every day occurrence that it is at sea ports. A banquet and dinner dance had been arranged at the Hotel Bancroft in Worcester for the evening of the second day of the races which was well attended and during which the prizes were distributed to the winners of the days events. Everything possible was done to insure a memorable time to the many visiting officials and contestants who were present from all sections of the country.

The racing events were arranged to provide an opportunity for mile trial records to as many drivers as possible during the forenoon and early afternoon of Thursday. Some 26 attempts were made and when it is realized that each driver must make six full runs of one mile each, it can be seen how much time can be consumed in this way. The timing was done by expert timers, stationed at each end and in the center of the mile course. These stations were all connected by telephone and six watches were used for each run. The mean of the speeds established in each run was found and this gives the final result in miles per hour. Any boats that did not show speeds at least within hailing distance of the existing records were flagged off the course in order to conserve time and permit

Photographs by M. Rosenfeld

Toy, Elliot Spencer's Johnson engined speeder with which he set a Class B, Division I record of 40.178 m.p.h.

PAULI'S CYCLONE
D-337

Pauli's Cyclone driven by George Pauli, Jr., won the Class D III and F III five mile events with a Johnson engine

other contestants an opportunity. Quite a number of the trials while close to the existing marks were not quite sufficient to surpass them. Ross Maddocks for example made an attempt with a class F Evinrude engine on a Baby Whale hull and accomplished a mean speed of 46.75 miles per hour His best run of the six was 47.87 which was, however, not quite good enough. Elliot Spencer, driving his little boat Toy with a Johnson Class B engine in Division I averaged 38.227 with the fastest run of 39.13. In Class A Division II J. A. Sullivan drove his little Herbst boat with a Lockwood Ace at 25.43 m.p.h. with a high speed of 25.714. The Class A Division I record was taken by Bertram Steacie with a little Lockwood powered boat which accomplished a speed of 27.622 m.p.h. and a top speed of 27.842 m.p.h. Miss Hilda Mueller also set a record with her Class C Evinrude engine in Division I of 39.709 m.p.h. but unfortunately this could not be allowed as it was found on checking the weight of her boat after the trials that it had lost a couple of pounds weight between the time when it was weighed at the builders' plant and when it was again weighed by the race committee. In Division II of Class A Norman Kalat was also successful in driving his Lockwood powered boat at a rate of 27.135 m.p.h. and Mrs. Mildred Hickey, the popular wife of the Commodore, set a mark of 40.984 with her Johnson powered Baby Whale.

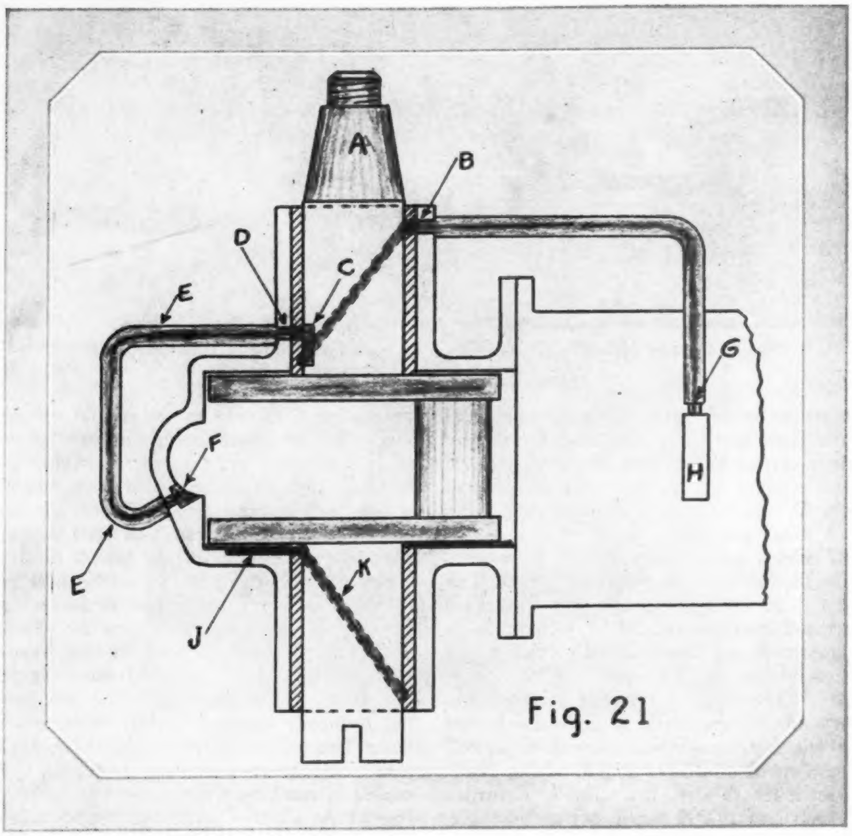
The remainder of the time trials which were run on Saturday succeeded in breaking some of the earlier records made on Thursday so that all of those mentioned in the previous paragraph do not necessarily remain on the books as the official record. The survivors will be found in the summary at the conclusion of this article. W. G. Harris driving a Johnson 32 in Class D-I set a mark of 42.706 which was beaten within a half hour by Theodore Thompson with a similar motor in a Penn Yan boat who accomplished a speed of 42.947 with the fastest of the six runs at a rate of 44.444 m.p.h. Elliot Spencer made another attempt, having found a few more revolutions in his Class B Johnson and this time set a mean speed of 39.217 m.p.h. with two of the six runs over the 40 mile mark. Miss Hilda Mueller, having corrected her boat weight made another attempt and drove her Evinrude powered Century boat to a Class C Division I record of 28.528 m.p.h. Mrs. Mildred Hickey also made another attempt in Class C-II and succeeded in reaching a mean speed of 42.200 m.p.h. with two of the six runs well over the 43 mile mark.

Ross Maddocks, Commodore of the New England Outboard Association, taking advantage of the new ruling that records would be admitted in Division III for drivers in this class made two runs with a Class D Johnson and a Class F Evinrude. In both of these he set up marks and attained a mean of 45.973 m.p.h. with the Class D Johnson engine two of the six runs being only slightly under 47 miles per hour. With the Class F Evinrude, he set a mark of 47.876 and in this case three of the runs were well over the 48 mile mark with one of them not far from 49. The boat used in both cases was his Baby Whale which he has used in many previous hard fought contests.

Of the events on the

(Continued on page 184)

A group of members and visiting regatta officials centered about Commodore Frank Hickey of the Worcester County Motor Boat Club



An automatic oil circulating using crankcase compression as used in the days when 3,000 r.p.m. was considered high speed

LOOKING INSIDE THE OUTBOARD ENGINE

The Difficult Problem of Properly Lubricating a High Speed Outboard Engine Has Been Solved By Utilizing Present Forces to Circulate Oil Within the Engine Crank Case

By P. A. TANNER, M.E.

Part V

WHEN and if metal rubs against metal, particles will become detached—wear will result. In an outboard motor, pistons and piston rings bear against the cylinder walls; connecting rods rub on the piston pin, and on the crank pin; the crank shaft runs in the main bearings; the drive shaft and the propeller shaft press against their respective bearings; the gear teeth roll and slide against each other. Wherever there is a moving part, there rubbing friction will be found. And if there is actual metal-to-metal contact wear results.

It is the object of every lubrication system to provide a thin film of oil between every pair of rubbing surfaces, and to maintain this film under all conditions. The oil film, often of almost microscopic thinness, must separate the one metal surface from the other even though high pressures tend to force it out and high temperatures weaken its resistance.

In the power head of an outboard motor, particularly of the two-cycle type, the lubricating oil must still lubricate under the most adverse conditions and must therefore have special qualities and characteristics. In the first place, the oil is mixed with the gasoline. Both are hydrocarbon compounds which previously had been associated and combined in the same crude oil. No doubt by repeating the distillation process all the gasoline could again be removed from the oil leaving both as they were before mixing, but neither the temperature conditions nor the time factor permits of this separation after the mixture enters the motor. Some separation does occur. Oil which is but slightly diluted with gasoline may be

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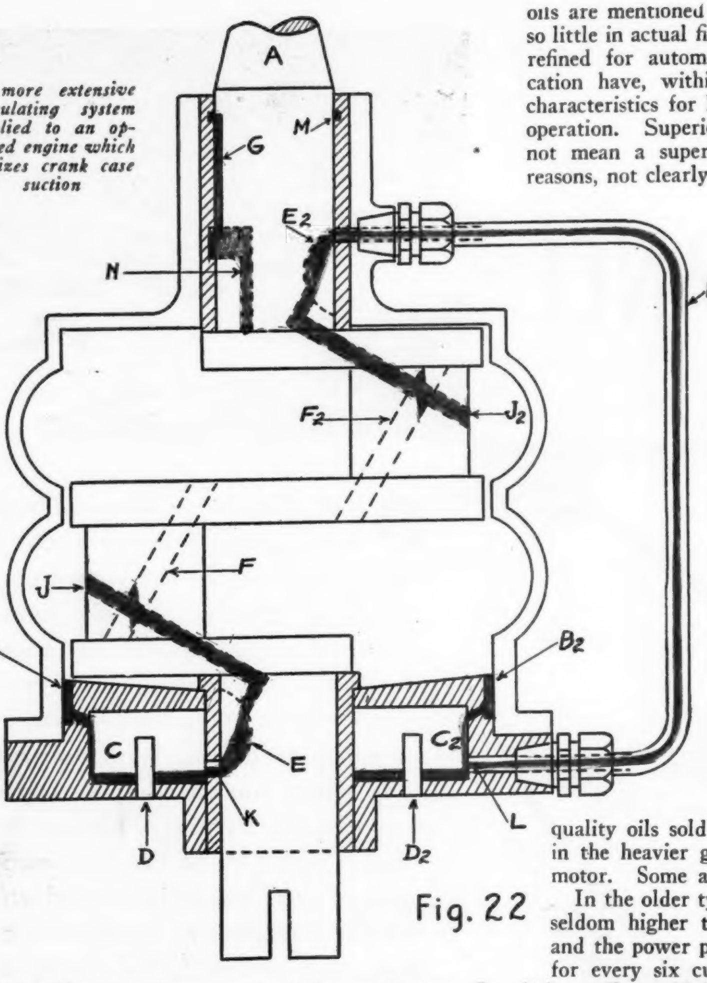


Fig. 22

A more extensive circulating system applied to an opposed engine which utilizes crank case suction

collected from the lower parts of the crank case. It is nevertheless true that the lubrication which actually reaches the surfaces of the cylinders, pistons, connecting rods, crank pins, and other parts, is diluted oil. It does not have the body, the sticky cohesiveness, that the original undiluted oil had. And in that degree it is a poorer lubricant.

Not only does some gasoline reach the rubbing surfaces along with the oil, but extreme temperatures also act to thin the oil and make it less resistant to pressure. Cylinder walls are in direct contact with the burning gases. Piston temperatures are high because the heat absorbed by the top of the piston must be conducted away through the skirt, through the oil film, into the cylinder walls, and thence to the water jacket. Even the crank pin and main bearings are hot, not only because of the heat carried down from the cylinders, but because of the friction resulting from the high rubbing speeds of the surfaces.

Suitable oil must have body. It must be sticky and viscous. Gasoline dilution plus heat will make it thin quickly enough. It should have a high burning point, that is, it must be only that part of the original crude, properly refined, that can be vaporized or ignited only at very high temperatures. The oil must also be free from wax which will clog strainers and carburetor passages. It must have a minimum of free carbon. When it burns, as much of it must in passing through the engine, it should deposit little carbon.

No technical physical specifications of high grade oils are mentioned here because apparently they mean so little in actual final results. All oils of better grade refined for automobile or motor boat engine lubrication have, within reasonable limits, the necessary characteristics for high temperature and high pressure operation. Superiority in any one specification does not mean a superior oil. And for one or several reasons, not clearly understood even by engineers most vitally interested in motor lubrication, one oil may demonstrate superior performance under trying conditions as against another of similar specifications. Much of the quality desired seems to result from the characteristics of the parent crude or the processes of refining.

In general, the light and medium grades of oil as used in automobiles are not so satisfactory in the outboard motor as the heavy, or extra heavy grades. The lubricant which separates out in the motor and protects the rubbing surfaces seems to have a heavier body and therefore better lubricating value if a heavy oil is used, although it is well known that these heavier grades do not burn so cleanly and deposit a greater amount of carbon. This is off-set somewhat however by the fact that smaller quantities are required.

Any of the better known high quality oils sold for automobile engine lubrication, in the heavier grades, is suitable for the outboard motor. Some are better than others.

In the older types of motors where the speed was seldom higher than 1,000 revolutions per minute and the power produced was about one horsepower for every six cubic inches of piston displacement, lighter oils could be used satisfactorily. As little as one-fourth pint of lubricating oil mixed with each gallon of gasoline would suffice. Sometimes as much as one-half pint to the gallon was recommended.

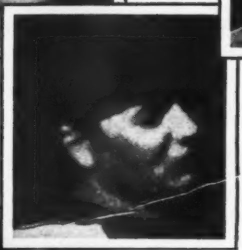
But as speed and power were increased, not only the quality and grade of oil had to be improved, but a greater quantity was required. In service motors operating at from 3,000 to 4,000 revolutions per minute and developing one horsepower for every two to three cubic inches of piston displacement, from one to one-and-a-half pints of heavy oil mixed with each gallon of gasoline is now specified after the motor has had a few hours running. In motors used for racing where the speed may run as high as 5,000 to 6,000 revolutions per minute, the usual specification is one quart of heavy oil mixed with each gallon of gasoline, and sometimes fresh-oil lubricating devices to the bearings are used in addition.

Some race drivers prefer to augment the usual lubrication with castor oil. Since this vegetable oil does not mix readily with gasoline, it is necessary to feed it to the motor with a small pump or a drip lubricator. It is usually fed slowly to the carbureter intake and enters the crank case with the charge. Castor oil has a very high lubricating value under the conditions encountered in gasoline engines, and since it is not diluted, it lubricates all parts with which it comes into contact. Its principle disadvantage is that when it burns, a sticky, gummy carbon is formed. This may cause sticking piston rings. A motor in which

Records

Margaret Mullen, 1 record, Class A, Div. 1

Al Thomson, 2 records, Class C, Div. 2



B.A.Wheeler, 2 records, ClassC,Div.1

Harold Chapman, 1 record, Class D, Div. 1

A. G. Martin, 1 record, Class B, Div. 2

Mildred Milde, 1 record, Class C, Div. 1

Records

Chas. Holt, 2 records, Class B, Div. 2

Chas. Adams, 2 records, Class B, Div. 1

"Chuck" Hall, 2 records, Class A, Div. 2

Bill Lyon, 3 records, Classes B and D, Div. 1

Dick Upsall, National Record Holder, Class D

H. G. Ferguson, 13 records, Classes B, C, and D, Div. 2

Records

Terrific racing speeds of outboard engines give lubricating oil its most severe test. It must resist heat and pressure at high speeds — minimize wear — prevent excess carbon and ring gumming. Which explains why 34 of the 40 official American outboard records and all three world's records — Classes B, C and D were won with

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castor oil is used should be taken down and cleaned rather frequently.

In the old single cylinder outboard motors it was rather common practice to lubricate the main bearings with grease supplied intermittently by the operator through ordinary screw-type pressure grease cups. This method was satisfactory in view of the comparatively low speeds and light pressures, provided that the operator did not forget to occasionally screw down the cups. The pistons, cylinders, and connecting rods were lubricated by oil mixed with the gasoline. Generally, no special provision was made to insure this oil reaching the bearings. The crank case was full of oil vapor—not a true vapor, but very fine particles—and some of this inevitably found its way to the rubbing surfaces. Little was required.

In a two-cycle engine the pressure on the connecting rod is always toward the crank shaft. Except in starting, the pressure is never against the cap of the connecting rod bearing. For this reason it is possible, and it has been general practice, to cut a rather large hole in the connecting rod cap. The particles of oil in the crank case then have a better chance of reaching and lubricating the crank pin. In most motors this is the only provision for getting oil to the crank pins whether of the plain type or with rollers.

The main bearings are even more difficult to lubricate unless some special provision is made for feeding the oil to them. The intermittent suction and pressure in the crank case tends to force oil and air and gas out through the main bearings. They get some lubrication in this way; in fact, shallow grooves are cut in the main bearing bushings to permit the oil to work its way out along the shaft. These grooves do not usually extend to the end of the bushing, however, as actual leakage would then occur. At the flywheel end, when the flywheel is also the magneto, this is not permissible as oil on the points of the ignition breaker will cause trouble. This hope system of main bearing lubrication has been successful in some of the older and some of the smaller motors. At modern high speeds, however, centrifugal force tends to throw at least the heavier particles of mixture in the crank case away from the crank shaft and it is quite difficult to get enough oil into the main bearings without special provision.

Outboard motor engineers have been very clever in utilizing forces already available for performing new functions without adding new parts. In the days when a speed of 3,000 revolutions per minute was considered very high, an automaitc circulation system for the main bearings was devised, making use of crank case compression. A later modification and development of this early system is diagrammed in Figure 21, which shows it applied to a small single cylinder motor. The principle of operation is shown rather than the exact details.

The lower main bearing is lubricated by the oil which collects in the bottom of the crank case as shown at J, where a small channel leads it into the shallow elliptical groove cut into the bushing. This is just natural gravity feed assisted by the crank case compression which tends to force the oil out through the bearing.

In the side of the crank case is a small pocket F located where it will catch the oil thrown off by the rotating crank shaft and connecting rod. A small screen covers this opening. A pipe E leads from it to the upper main bearing at D. A small flat is ground on the side of the crank shaft, C, in line with the hole D but extending to the bushing groove when in the position shown. This groove connects with the outlet hole B near the top of the bushing on the other side. A small pipe leads from B to a point G which opens into the intake manifold or passage leading to the third port H.

When there is compression in the crank case, oil and a certain amount of air is forced through the pipe E, to the point D, into the space C, through the groove and around to the point B, through the pipe to G, and thus into the intake passage where it will again be drawn into the crank case when the third port again opens. Since there is pressure inside the crank case at F and neither pressure nor suction at the point G, there is thus a small passage clear through for the oil to move. That which remains in the groove is carried around the surface of the upper bushing by the rotation of the crank shaft.

When there is suction in the crank case, the small flat space C has been moved around to the other side of the bearing so that the opening D is sealed by the surface of the crank shaft and there is no connection between D and the groove in the bearing. The oil, therefore, cannot move backward toward the crank case. The excess oil is simply carried away to G where it again enters the engine.

Figure 22 shows the principle of operation of a more extensive system designed to utilize the suction of the crank case and to circulate oil to the connecting rod bearings as well as the main bearings. The sketch shows the system applied to an opposed twin motor.

Oil collects in the bottom of the crank case in two small pockets provided for the purpose, B and B2. The oil from B is used in the lower main bearing. Just below the crank case, and on one side of the main bearing there is cast the oil reservoir C, and extending into this is a small air-tube D. Oil from the pocket B is forced by crank case compression through a very small passage into the reservoir C. When sufficient has collected, it can flow through the small passage K to the inside of the main bearing bushing. Cut into the crank shaft is a key-way E from which leads a drilled passage out to the crank pin, where there are two holes, J and F. The lower main bearing and the lower crank pin are lubricated as follows:

When there is suction in the crank case, this is effective down through the hole F in the crank pin, through the passage to E, through K into the oil reservoir. Air enters the oil reservoir through the tube at D and passes through the opening K carrying oil with it. This oil and air fills the opening E and the passage to F. The air can pass through the hole F into the crank case, but the heavier globules of oil are thrown outward by the centrifugal force of the revolving crank shaft and pass through the drilled passage J to the surface of the crank pin and the inside of the connecting rod bearing. When there is pressure in the crank case, the key-way E is not in register with the opening K, so the passage is sealed. At that time, however, oil is being forced from the crank case into the oil reservoir C.

The lubrication of the upper main bearing and the upper crank pin is somewhat similar. Oil from B2 is forced into the oil reservoir C2, from which it is taken through the opening L and the pipe H to the upper main bearing. Here there is another key-way E2 connecting with the hole K2 and from which is drilled the passage through the crank shaft cheek to the crank pin and the passages F2 and J2.

When there is suction in the crank case, this is effective through F2, the drilled passage, through the key-way E2 and the opening K2, through the pipe H,

(*Continued on page* 188)

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$ 500 for 55 miles per hour in time trials. $ 500 for 55 miles per hour in competition.
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Such are the Ole Evinrude awards for which Division I, II and III "4-60" drivers may compete. Total, $3500 in cash or trophies of equivalent value.

Already many of America's foremost racing drivers are demonstrating that all of these speeds are possible of attainment with "4-60". For instance:

Flint, Mich., May 30 — "4-60 easily wins unlimited race against other four and five cylinder motors".

Albany, N. Y., May 25 — "4-60 first and second in Albany-Troy 75 mile Marathon. Third 15-mile lap clocked at 50 miles per hour".

Alexandria Bay, Va., June 1 — "Against big field, 4-60 took lead at start and was never seriously pressed".

LaCrosse, Wis., June 8 — "In each of three heats of free-for-all, 4-60 decisively defeats field of 40 fastest drivers in the entire middle west".

Fastest Marathon Time!

"Ray Preganzer wins 40 mile Decoration Day event at Terre Haute, Ind., with '4-60' making 46.4 m. p. h. a new marathon record". Preganzer shown here with Studebaker trophy, another important "4-60" victory at South Bend, Ind. June 9. *Latest* — Preganzer first in both heats of open free-for-all, Chicago Daily Times Regatta, June 15.

Fastest Time on Worcester Waters!

Ross Maddocks, (below), noted racer, makes fastest time ever made on Worcester waters at Worcester, Mass., Regatta, May 30, driving "4-60".

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DRIVERS GET CONCESSIONS

Racing Commission Approves Changes in Outboard Rules Which Will Permit Records, Cash Prizes and Stock Motors in Division III. A New Division IV Created Where All Persons Connected With the Trade Must Race. National Outboard Race Drivers Association Approves and Offers Fullest Co-operation

AT a meeting held recently in Chicago the race drivers and the Racing Commission got together and settled all of their differences. The National Outboard Race Drivers' Association asked that certain revisions be made in the racing rules, chiefly to permit cash prizes, stock motors and records in Division III and that this division be put on the same plane as Division II as far as the barring of the trade is concerned. The Racing Commission granted these requests in full. The drivers' association in turn voted 100 per cent approval of the racing rules as amended and promised to give their fullest co-operation in seeing that the rules were universally used in all races during 1930.

The rules which were amended follow:

CHANGES IN OUTBOARD RACING RULES

1. *Creation of a new division of drivers and owners to be known as Division IV. Anyone in any way connected with the outboard motor or outboard industry, as manufacturer, dealer, salesman, builder, service man or who is paid to race or receive gifts or gratuities to race, or races for commercial gain, must race in this Division IV.*

2. *Records and cash prizes will be allowed in Division III and stock motors required. Divisions I, II or IV drivers cannot compete in Division III.*

3. *The boat and motor must be owned at least five days previous to the date of the race by one qualifying in the Division in which the boat is entered, except that Division III owners or drivers may race in Division IV.*

4. *Expense money may not be offered in lieu of prize money in Division I or Division II, and expense money in these divisions may only be paid by one qualifying as a Division I or Division II owner or driver.*

Rule III—Motor and Hull Restrictions

1. The useful and necessary weight of the hull, with steering wheel and motor controls shall not be less than the following:

Class A	100 pounds
Classes B and C	150 pounds
Classes D and larger....	190 pounds

Rule IV—Owners and Drivers

Owners and drivers shall be divided into four divisions as follows:

Division I—Those who have competed in less than 15 heats or races since March 1st, 1929, except those who are hereinafter classified in Division II, III or IV.

Division II—Those who have competed in 15 or more heats or races since March 1st, 1929, except those who are hereinafter classified in Division III or IV.

(Note: A driver having started in any heat or race shall be considered as having competed. A driver who goes to the Sectional Championship events in Division I shall continue to race only in Division I until after the National Championship event of that season, even though he may before that time have otherwise qualified for Division II.)

Division III—Those owners or drivers who qualify as follows:

One who has raced for a cash prize or driven for an owner who has raced for a cash prize offered since January 1, 1930, or enters or has entered a race where a cash prize is offered, excepting those who are hereinafter classified as Division IV.

Division IV—Those owners or drivers who qualify as follows:

(a) One who is to be paid or has been paid, directly or indirectly, to race since January 1, 1930.

(b) One who is to be reimbursed for expenses or has received compensation or expenses for racing from one who would be classed as a Division IV driver or owner, since January 1, 1930.

(c) One who is an employee of an outboard boat builder or outboard motor manufacturer or has been an employee of either within one year.

(d) One who is connected with the outboard motor or outboard boat industry or the business of building, selling, repairing, distributing or servicing outboard motors, outboard boats or outboard accessories or has been connected therewith in any capacity for monetary gain or business profit, within one year.

(e) Employees within one year, of those mentioned in paragraph (d).

(f) One who receives or has received gifts of boat, motor, parts or other outboard equipment from one qualified as a Division IV owner or driver or receives loans or other gratuities for racing from a Division IV owner or driver.

(g) Those owners or drivers who may be designated by the National Outboard Racing Commission or any member thereof, as a Division IV owner or driver.

(h) One who races or drives or has raced or driven an outboard boat or motor for commercial gain or represents some person or corporation interested in racing for commercial gain or for advertising value.

(i) One who has received pay, within one year, for serving on a motor boat.

Note: Naval or Coast Guard officers are excepted, provided they do not otherwise commit an infraction of the above rules.

Service prior to Jan. 1, 1930, shall not apply in above.

Rule IV-A—Regulations

1. American Outboard Records shall be allowed in Division I, and Division II, and Division III.

2. Only stock motors (see definition Rule XX) shall be raced in Division I, and Division II, and Division III.

3. The boat and motor must be owned at least five (5) days previous to the date of the race by one qualifying in the division in which the boat is entered except that Division III owners or drivers may compete in Division IV.

4. One who has ever raced in Division III or IV since Jan. 1, 1930, shall never be eligible to race in Division I or II, except as provided in Rule IV, Division IV.

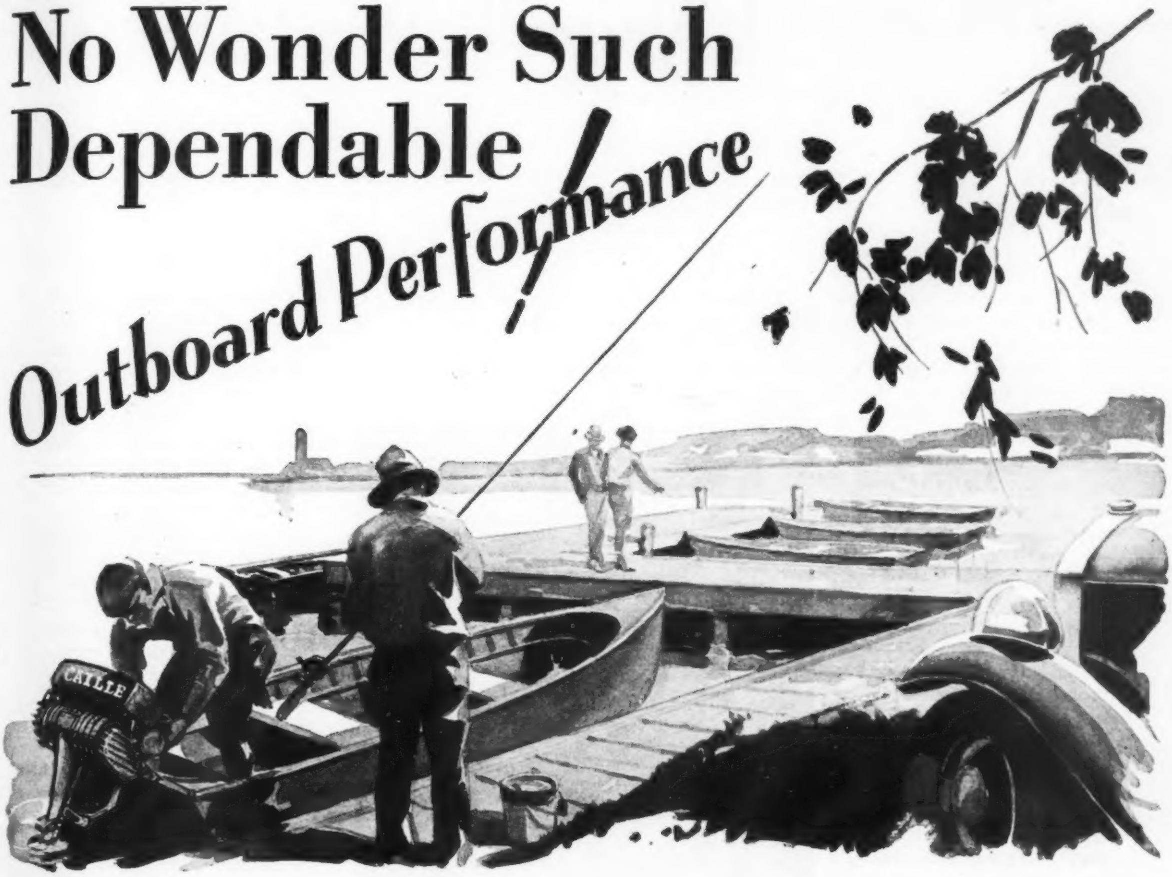
5. An owner and a driver, when entering a boat for a race, must give sufficient information on the entry blank as to permit the Local Committee to determine the status of the owner, driver, boat and motor as to whether they belong in Division I, II, III or IV.

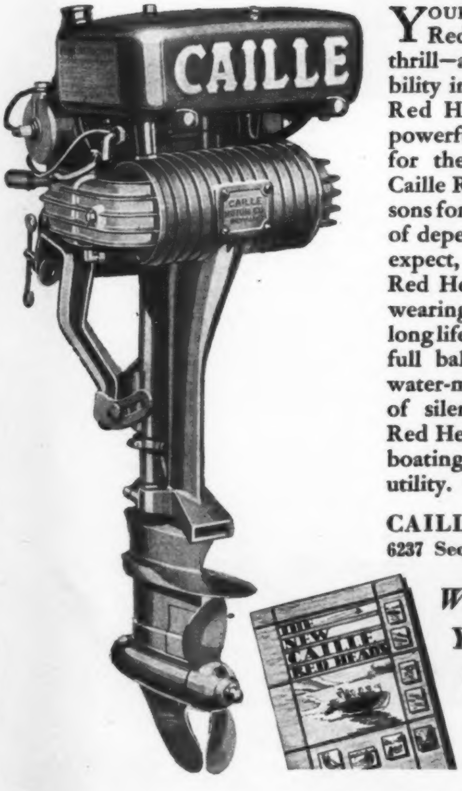
6. Filing false or incorrect information on entry blank shall be sufficient cause for suspension of owner and driver for one year from all racing as provided in Rule V.

7. A driver or an owner placed in the incorrect division by the Local Committee shall so advise the Committee in

(*Continued on page* 190)

No Wonder Such Dependable Outboard Performance!




CAILLE
THE NEW CAILLE RED HEADS

Your first experience with a Caille Red Head will give you a new thrill—a new conception of dependability in outboard motoring. Caille Red Heads are speedy, smooth, powerful. There's dozens of reasons for the outstanding reliability of Caille Red Heads . . . dozens of reasons for the flashing, hour after hour of dependable performance you can expect, *and get,* from every Caille Red Head Outboard Motor! Every wearing part is triply-guarded for long life. New Red Head powerhead, full ball-bearing construction, and water-muffled exhaust insure a wealth of silent power. There's a Caille Red Head for every boat, for every boating purpose—racing or general utility. See them at your dealer's.

CAILLE MOTOR COMPANY
6237 Second Blvd. Detroit, Mich.

All Wear Parts Triply-Guarded *on* CAILLE RED HEADS

CAILLE
RED HEAD
PERFECT OUTBOARD CONTROL

Write for Your Free Copy of the New Caille Catalog

MAIL THIS COUPON TODAY
CAILLE MOTOR COMPANY, Detroit, Mich.

Gentlemen: Please send me the new 1930 Caille Catalog, without obligation to me.

*Name*____________________

*Address*____________________

*City*__________ *State*__________

THE MONTH WITH THE OUTBOARDS

Items of Particular Interest to Followers of the Sport

INCREASING ACCESSORY SALES

"UNCLE SAM, by requiring certain equipment on outboard motor boats, is increasing the sales of outboard dealers an average of 10%," is the opinion of Warren Ripple, president of the Johnson Motor Company, manufacturers of Sea-Horse motors.

"Getting the purchaser of an outboard motor into the frame of mind that makes him a prospect for other accessories is easy after he has bought the required articles, such as the fire extinguisher, life preserver, and oars," said Mr. Ripple.

"Every outboard purchaser sees the need for such accessories as emergency fuel tanks, motor locks, anchors, etc., and aggressive dealers are able in many instances to sell accessories up to 40% or 50% of the cost of the motor.

"One dealer selling Sea-Horse outboard motors in a small town in Michigan opened this season with an intensive drive on accessories. Of his first six motor sales, four included steering wheels as well as the ordinary accessories.

"Not only are dealers beginning to appreciate the money value of pushing accessories—they are now going after this business in a scientific manner. Formerly, most of the accessory business on outboards was done out of a catalogue. Now dealers are carrying complete stocks and turning them over rapidly."

One of the most successful plans for selling accessories is by means of a special accessory display rack. The one illustrated here is furnished by the Johnson Motor Company to its dealers. It is of metal construction, enameled in colors, and holds a complete assortment of the most wanted accessories.

It occupies but a small space on the dealers' floor, displays the merchandise effectively, and acts as a silent salesman.

USEFUL ACCESSORIES
Johnson
MOTORS
BOATS

A new rack used by Johnson dealers for the display of outboard accessories

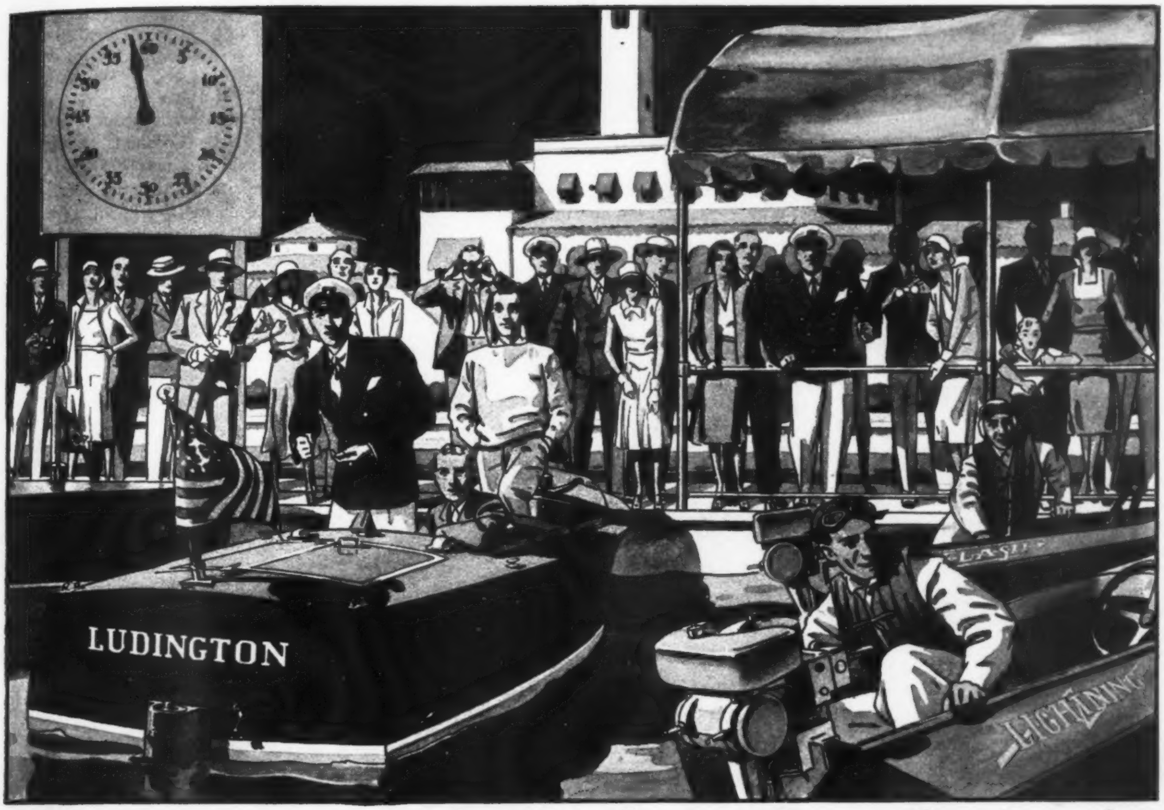
MIDDLETOWN GETS NATIONAL CHAMPIONSHIPS

Middletown, Connecticut, will be the scene of the national outboard championship races and October 11, 12 and 13 are the dates on which the series of races will be held, it was announced by the National Outboard Race Commission meeting in Chicago, May 29.

Each fall a series of race events are sponsored by the National Outboard Association in which the champion pilots of various sections of the country vie for national honors in each of the six racing classes. The different classes are determined by the piston displacement of the motors used by the racers. Last year the championships were run off on the water track at Peoria, Illinois, for five racing classes but this year the commissioners have officially sanctioned the use of the giant F class motors which have just been placed on the market and which brings the total of motor classes that can be used up to six.

The commission also made provision in the racing rules for the staging of events for drivers who wish to race for cash prizes and records in Division III at Middletown. There have been a number of malcontents among the drivers because they have been barred from competition for both cash prizes and records with stock motors. Now that the situation has been ironed out, an unusually large field of entries is expected to take part in Division III events. The weight of boats on which Class D, E and F motors are to be used in sanctioned race events was set at 190 pounds.

Don Barclay, former Follies' comedian, tries out a Sea-Horse powered racing outfit in which he hopes to set new American speed records



Ludington Racers are winning nation-wide championships. Among the hundreds of trophies taken, these in 1930 are important:

Colonel Green Trophy
Miami, Florida, 1st & 2nd.

Albany-New York Marathon
Hudson River, 1, 6, 9, 10. 118 starters.

National Championships
Worcester, Mass., 1st. Class B, Div. 3.

Intercollegiate Gold Cup Regatta
Lake Skaneateles, 1st in Div. 2, Class B.

Drive a Ludington and you drive a winner!

LIGHTNING A—11½ ft., for A Class, Div. 1 & 2; B & C Class, Div. 3, $240.

LIGHTNING B—11½ ft., for B & C Class, Div. 1 & 2; D Class, Div. 3, $260

FLASH—14 ft. for D, E & F Class, Div. 1, 2, or 3—$310.

ALL PRICES F. O. B. PHILADELPHIA

Speed with positive control and comfort

The Ludington Sportship . . . $995

The smashing speed that is bringing home trophy after trophy to join the hundreds already won by Ludington, Dunnell-designed, racing hulls is imparted to the 17-ft. Dunnell-designed Ludington inboard Sportship! There's speed to spare—but speed controlled by the rudderless outboard drive unit—the unit that swings the Sportship in her own length in instant obedience to the wheel—forward or reverse.

See the Sportship! Notice the sleek fast lines, the brilliant polish of her mahogany hull, the high, dry freeboard, the gleaming nickeled-silver fittings! Get 5 of your friends and ride in the Sportship! Settle comfortably in the dry cockpits forward and streak across the waters to the quiet hum of your powerful 4-cylinder Gray motor under the covered hatch aft. The Sportship's ready to drive—completely equipped with auto type steering wheel and control board, starter, flags, cushions, tools, lines—everything!

Increased facilities have speeded up production to such an extent that now the Sportship and Sportship Senior (refinements of fittings and equipment for $1265) are ready for immediate delivery from your dealer or direct from us. They can be bought on deferred payments at a low monthly cost. If you want an inboard runabout or outboard racing hull that have proved to be real champions—mail the coupon for further information.

On display at Port Elco, 247 Park Ave., N. Y. C.; Port Ludington, 258 S. Broad St., Phila.; Wheeler Shipyard, Syracuse, N. Y.; and other convenient locations.

LUDINGTON
AIRCRAFT, INC.
108 Atlantic Building
Philadelphia, Penna.
BOAT DIVISION

Without obligation, send me your new catalogue on Ludington boats

I am interested in
☐ Sportships
☐ Outboard Racing Craft
☐ Dealer Franchise

Name ____________________

Address ____________________

THE MONTH WITH THE OUTBOARDS

(Continued from page 178)

Officials and contestants in the first eastern intercollegiate outboard regatta held at Skaneateles, N. Y.

After announcing that Division III races may be run off for cash and records, the commissioners announced that the National Outboard Association will award medals to place winners in this division at Middletown and that the Middletown Yacht Club would post the cash prizes. The N.O.A. awards valuable trophies to the amateur drivers of Divisions I and II who place in the events staged for them in the national championships. However, the commissioners absolutely ban competition between amateur drivers and cash prize racers.

Because of the unprecedented amount of interest in racing out of the conditions which many drivers have been dissatisfied with, the Middletown races are expected to draw the biggest field ever entered in an outboard event. Most states now have their own racing circuits and the champions of each section will have their expenses paid to Middletown by the National Outboard Association.

Chas. Holt carried off first honors at Elsinore in Class B, division II

Race Commissioner Arthur L. Bobrick of Los Angeles, California, presented to the Commission the bid of Oakland, California, to be the site for the championships in 1931.

ELSINORE'S SPRING REGATTA

On May 18, more than ten thousand visitors saw one of the best regattas ever held on Lake Elsinore. The cloudy, unsettled, threatening weather of the preceding few days gave way to clear skies and perfect water conditions on the day of the race.

Three American records were hung up before the day was over and but two tip-overs occurred in the field of thirty odd contestants for the honors.

H. G. Ferguson, world premier outboard king, driving his famous Elsinore Blue Streak, established another 5-mile Class C, Div. II record at 40.36 m.p.h. Chas. Holt set up 38.62 m.p.h. in Class B, Div. II, while Harold Morehouse, a visiting driver from Oakland, taking his initial spin in a new 1930 Elsinore stock hydroplane, set a mark of 36.88 m.p.h. in Div. I; all were equipped with Johnson Sea Horses.

In Class C, Div. II, H. G. Ferguson raised the 5-mile competition record to 40.358

Fergy's time for the 5-mile D-II event was within one-hundredth of a mile per hour of his record made and accredited April 6.

The Ladies Race was captured by Miss Louisa Fox driving Humming Bird—a Smith boat, at 36.14 m.p.h.

The Runabout race, the closest of its class ever staged here, was won by Don Condit of Long Beach driving Motorite, an Ashbridge creation.

The Skinner event was won after a close battle of three four mile heats, by the veteran outboard pilot Johnny Graham of Elsinore at the helm of Miss Clevelin The runabout S. H. Burton piloted by Floyd Chandler was second.

RULE CHANGES EMBRACE WORLD'S RECORDS

Recognition of new speed marks established by drivers in outboard race events as official world's records will take effect immediately, it was announced by Charles F. Chapman, Chairman of the National Outboard Race Commission, following a meeting of the commissioners in Chicago, May 29.

It has been the practice of American officials to submit American speed records to the International Motor Yachting Union of Belgium, which is made up of the leading motor boat officials of Europe, for their official sanction as world's records. The International Union meets but once a year and it takes much time and considerable trouble to get the union to

(Continued on page 193)

COMPARE PERFORMANCE

Before You Buy

LEAVE doubt behind. Shove off to a summer of pleasure, certain that your wisely chosen new Elto meets better than any other outboard your exact demands in power and speed, in quietness and dependability.

Here is the 1930 Elto line. Seven models, 2¾ to 35 horsepower. The widest range of power available in any make of outboard today! A model specifically designed to meet each requirement. (1) The *fastest, most powerful* runabout motor — four cylinders, superb smoothness. (2) A *new* 14 horsepower runabout and big-boat motor. (3-4) *Two* electric starting models. (5) A fast, rugged, utility motor. (6-7) *Two* folding motors that offer the last word in small-motor convenience, lightness and compact portability.

Know the Elto line. Compare every phase of performance and in-built quality before you buy. Compare dollar-for-dollar value. Write *today* for the Elto book — and go to your nearest Elto dealer for a demonstration of any model.

ELTO DIVISION, ***Outboard Motors Corporation***
OLE EVINRUDE, ***President***
3184-27th St. Milwaukee

Elto

QUAD
35 H.P., 4 cylinders. Rotary disc valve, underwater silencer. Electric starting model, $395

Senior
SPEEDSTER
14 H. P. Underwater silencer. Flywheel starting. $215
Electric starting model, $280

Service
SPEEDSTER
7. H. P. Rudder steering, underwater silencer available at small added cost. $165

QUAD
Cord starting; identical in other details with Electric starting Quad.
Price, $345

LIGHT-WEIGHT
3½ H.P. Weight 38 lbs. Folded, measures 22" long by 11" square.
Price, $150

FOLD-LIGHT
2¾ H. P. Weight only 29 pounds. Folds instantly, measures only 17" overall. $145

SUMMARY OF RESULTS, WORCESTER COUNTY MOTOR BOAT CLUB
MAY 29-30, 1930

CLASS B—DIVISION I AND II.

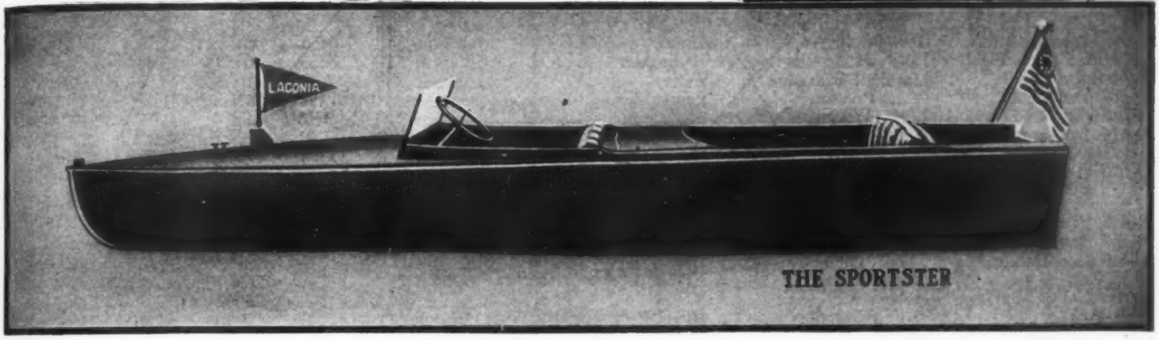
Boat	Driver	Builder	Engine	Time		Best Speed	Total Points	Position
				1st Heat	2d Heat			
B-67 Zip	W. Harris	....	....	8:35	8:35	34.95	800	1
B-304 Dixie III	B. Steacie	....	....	9:10	9:14	32.73	685	2
B-42	Mr. Lecuyer	....	....	9:12	D.N.F.	....	324	..
B-121 Century Midget	Robert Flagg	....	....	9:15	8:48	34.09	650	3
B-70 Teeta	Norman Kalat	....	....	9:18	9:32	32.26	545	4
B-822 Baby Whale	Mrs. Krim	....	....	9:31	D.N.F.	31.52	225	7
B-114 Miss Gensalo	N. N. Hathaway	....	....	9:35	9:37	31.30	452	5
B-823 Sea Papa	Carl Joy	....	....	10:42	9:46	30.72	394	6
B-68 Zev	Mrs. Hickey	....	....	11:15	D.N.F.	26.67	144	8
CLASS A—DIVISION II.								
D-123 Nehi	Carl Mason	Porteus	....	11:42	12:21	25.64	689	2
B-72 Oh-Oh	Norman Kalat	Padulla	....	11:45	11:37	25.82	761	1
B-304 Misstep	B. Johnson	....	....	12:10	11:49	25.39	685	3
B-27	Mr. Sullivan	Herbst	....	12:17	12:12	24.59	613	4
B-25 Herbst	Ed. Dority	Herbst	....	13:34	12:44	23.56	512	5
B-127 Mongler	Mrs. Hickey	Porteus	....	D.N.F.	D.N.F.	....	...	..
CLASS A—DIVISION I.								
B-304 Misstep	B. Steacie	....	Lockwood	11:19	11:07	26.99	800	1
B-72 Oh-Oh	C. Padulla	....	Lockwood	11:42	11:56	25.64	722	2
B-57 Dot	W. Harris	....	Lockwood	12:04	12:22	24.86	648	3
B-25 Herbst	Marion Dority	Herbst	Lockwood	13:09	12:25	24.16	578	4
B-702	Mr. Philpott	....	Lockwood	13:47	13:40	21.95	481	5
A-21 Moby Dick II	C. Harris	....	Johnson	14:00	17:17	21.43	346	8
N-541	E. Kroephe	....	Lockwood	14:14	13:04	22.96	452	6
B-704	E. Merseeau	....	Lockwood	14:32	14:05	21.30	365	7
B-707	D. H. Lucas	....	Lockwood	14:38	14:56	20.50	313	9
B-706	....	....	Lockwood	15:06	D.N.F.	....	121	11
B-703 Miss Edith	C. W. Perkins	....	Lockwood	16:24	16:03	....	244	10
CLASS B—DIVISION II.								
B-25	Ed. Dority	Herbst	Johnson	8:36	9:54	34.88	689	2
B-68 Zev	Mrs. Hickey	Kelley	Johnson	8:48	8:44	34.35	761	1
B-70 Tee Ta	N. Kalat	Kelley	Johnson	9:00	9:00	33.33	648	4
D-55 Hot Spot	D. Rockwell	Porteus	Johnson	9:14	8:50	33.96	650	3
D-123 Nehi	Carl Mason	Porteus	Lockwood	9:49	D.N.F.	30.56	256	5
CLASS B— DIVISION I.								
D-651 Toy	E. A. Spencer	Harrison & Wythe	Johnson	8:05	8:03	37.267	800	1
B-67 Zip	W. Harris	Kelley	Johnson	8:22	8:24	35.86	722	2
B-712 Century Cyclone	C. N. Rand	Century	Johnson	8:42	8:36	34.88	613	3
B-114 Miss Gensalo	N. N. Hathaway	Cute Craft	Johnson	8:57	8:56	33.58	545	4
B-822 Baby Whale	Mrs. Krim	Kelley	Johnson	9:05	8:57	33.52	481	6
B-304 Dixie III	B. Stacie	Kelley	Lockwood	9:20	D.N.F.	32.14	225	8
N-570 Flowers Falcon II	Mr. Jankowski	....	Johnson	9:51	8:25	35.64	520	5
B-714 Miss Providence	Mr. Coogan	....	Caille	10:02	9:47	30.66	365	7
B-812	C. S. Whitney	....	Johnson	11:47	D.N.F.	25.46	144	9
CLASS C—DIVISION III.								
B-84 Baby Whale	Marshall Eldredge	Kelley	Johnson	7:30	7:30	40.00	800	1
N-604 Penn Yan	L. E. Preston	Penn Yan	Johnson	7:41	7:37	39.39	722	2
B-93 Baby Whale	C. S. Clement	Kelley	Evinrude	7:56	7:49	38.38	648	3
B-20 Baby Whale	C. D. Yule	Kelley	Evinrude	7:58	8:03	37.66	514	5
D-615 Hydro Foil	W. Overton	Ollendorf	Johnson	8:14	7:49	38.38	545	4
D-305 Witchcraft	Harry Johnson	....	Evinrude	8:14	8:01	37.42	481	6
B-13 Baby Whale	Ross Maddocks	Kelley	Evinrude	D.N.F.	D.N.F.	....	...	7
CLASS C—DIVISION I.								
N-570 Flower Falcon	W. Jankowski	Flower	Johnson B-16	8:09	8:30	36.81	625	3
B-79 Baby Whale	A. Johnson	Kelley	Evinrude	8:29	8:21	35.93	650	2
A-31 Jet	P. H. Bailey	Bossert	Evinrude	8:30	8:31	35.29	520	4
B-139 Century Hurricane	Hilda Mueller	Century	Evinrude	8:32	7:54	37.97	650	1
B-22 Nip	S. S. Randolph, Jr.	Penn Yan	Johnson	8:34	8:27	35.50	512	6
B-58 Winchester	W. B. Harris	....	Evinrude	8:59	8:45	34.29	394	8
B-21 Kemo	K. R. Mosher	....	Evinrude	9:17	8:02	37.34	520	5
B-67 Zip	W. G. Harris	Kelley	Johnson	10:39	Disq.	28.17	169	9
B-131 Bay Bee	J. S. Swingle	....	Johnson	D.N.S.	7:51	38.22	400	7
B-41 All	J. F. Bicknell	....	Evinrude	D.N.S.	Disq.	....	...	10
CLASS C—DIVISION II.								
B-68 Zev	Mrs. Hickey	Kelley	Johnson	8:09	7:40	39.13	800	1
B-117 Hydro Foil	Mr. Mooney	Ollendorf	Johnson	8:32	8:29	35.36	617	2
N-591 Kaydet III	A. Flower	Oaks	Evinrude	8:54	8:40	34.62	549	3
B-137 Whale	R. K. Griffin	Kelley	Johnson	Disq.	7:41	39.05	361	4
B-888 Whale	Bob Warner	Kelley	Evinrude	Disq.	8:01	37.42	324	5
B-700 Whale	Nelson McKenzie	Kelley	Evinrude	Disq.	8:29	35.36	289	6
B-86 Comet	Phil Emerson	....	Evinrude	D.N.F.	11:15	26.67	196	7

(*Continued on page* 184)

YOU CAN'T BUY A *Good* ROWBOAT AT THIS PRICE

WAS $369

NOW $200



THE SPORTSTER

THE liquidation of our Boat Division enables you to buy a brand new Laconia SportSter at this amazingly low price. There are a few more left in stock. Don't delay. Clip the coupon *now*.

EQUIPPED WITH

- Bow Light
- Stern Flagpole
- Stern Light
- 2 Bow Chocks
- Bow Cleat
- 4 Fender Hooks
- 2 Fenders
- Paddle
- Windshield
- Steering Wheel
  - *with Cable, Pulleys, and Fairleaders Installed.*
- Life Preserver Type Cushions
- Battery Box and Strap
- Ring at Transom
- Switches
- Completely Wired for Lights

The value of this equipment is about $100. It is included with the "SPORTSTER" at no extra cost.

A few "SPORTSTER" Hulls, equipped only with windshield, life preserver cushions, and forward cleat, at $150

SPECIFICATIONS

	SportSter
Length over all	15' 11"
Beam over all	52"
Weight complete (*without motor*)	350 lbs.
Weight, crated	750 lbs.
Planking and decking	Philippine Wood (Individual planks)
Bottoms	Double planked, with cloth set in white lead between layers for watertightness, painted with anti-fouling bottom paint. Additional stringers besides keel and chines to provide required bottom strength.
Sides	Batten seam construction.
Ribs	Assembled with brass bolts, nuts and washers. Designed for maximum strength.
Fastenings	Copper or brass throughout.
Hardware	White nickel brass.

PRICES: F. O. B. Laconia, N. H.

LACONIA
CAR COMPANY
LACONIA, NEW HAMPSHIRE, U. S. A.

Laconia Car Company, Laconia, N. H.

Gentlemen: Enclosed find check for ☐ SportSter $200
☐ Unequipped 150

Ship to:

*Name*________________________________

*Address*______________________________

*City*________________ *State*______________

SUMMARY OF RESULTS, WORCESTER COUNTY MOTOR BOAT CLUB
MAY 29-30, 1930

CLASS B—DIVISION III.

Boat	Driver	Builder	Engine	Time 1st Heat	Time 2d Heat	Best Speed	Total Points	Position
P-839 Mercury Too	B. Tuck	Ludington	Johnson	8:02	8:05	37.34	800	1
B-1 Will Try	J. E. Wilkinson	Herbst	Johnson	8:16	8:28	36.29	650	2
B-84 Baby Whale	Marshall Eldredge	Kelley	Johnson	8:32	8:27	35.50	648	3
B-115 Dillon	I. S. Dillon	Dillon	Lockwood	9:12	D.N.F.	32.61	289	5
M-503 Century Midget	Roy Brady	Century	Johnson	9:25	8:25	35.64	617	4
CLASS D—DIVISION II.								
B-68 Zev	Mrs. Hickey	Kelley	Johnson	7:50	11:42	38.30	689	2
B-888 Baby Whale	Bob Warner	Kelley	Evinrude	8:58	8:12	36.59	761	1
B-25 Herbst	Ed. Dority	Herbst	Johnson B-6	D.N.F.	D.N.S	....	...	5
B-70 Tee Ta	Norman Kalat	Kelley	Johnson	13:56	9:20	32.14	648	3
B-117 Hydro Foil	B. Mooney	Ollendorf	Johnson	D.N.S.	8:23	35.79	361	4
CLASS D—DIVISION III								
D-337 Paul's Cyclone	Geo. Pauli, Jr.	Century	Johnson 32	6:53	6:55	43.58	724	1
B-13 Ludington Flash	Ross Maddocks	Ludington	Johnson 32	6:55	6:53	43.58	722	3
B-84 Baby Whale	Marshall Eldredge	Kelley	Johnson	7:11	6:46	44.33	724	2
N-557 Penn Yan	L. E. Preston	Penn Yan	Johnson	7:12	D.N.S.	41.67	289	6
B-1 Ludington	J. E. Wilkinson	Ludington	Johnson	7:13	7:14	41.57	545	4
D-614 Saugatuck	S. Ollendorf, Jr.	Ollendorf	Johnson	7:21	D.N.F.	40.82	225	7
B-115 Dillon	I. S. Dillon	Dillon	Johnson	7:34	7:29	40.09	452	5
D-616 Ollendorf	Willis Overton	Ollendorf	Johnson	D.N.F.	D.N.F.	....	...	
CLASS F, DIVISIONS I AND 11—ONE HEAT—15 MILES								
B-888 Penn Yan	Bob Warner	Penn Yan	Evinrude F	....	22:56	39.22	400	1
B-137 Baby Whale	R. K. Griffin	Kelley	Johnson C	....	23:08	38.65	361	2
N-685 Dad Daddy	Theo. Thompson	Penn Yan	Johnson D	....	23:13	38.60	324	3
B-68 Zev	Mrs. Hickey	Kelley	Johnson C	....	D.N.F.	....	...	
B-700 Baby Whale	Nelson McKenzie	Kelley	Evinrude C	....	25:07	35.80	289	4
B-41 Ace	J. F. Bicknell	Bicknell	Evinrude C	....	27:16	32.90	256	5
B-714 Century	Mr. Coogan	Century	Caille C	....	D.N.F	....	...	
B-58 Winchester	W. B. Harris	....	Evinrude C	....	D.N.F.	....	...	
CLASS F, DIVISION III—ONE HEAT—10 MILES								
D-337 Paul's Cyclone	Geo. Pauli, Jr.	Century	Johnson 32	....	13:29	44.47	...	1
B-13 Baby Whale	Ross Maddocks	Kelley	Evinrude F	....	13:39	43.80	...	2
B-84 Baby Whale	Marshall Eldredge	Kelley	Johnson 32	....	13:50	43.30	...	3
D-616 Saugatuck	Willis Overton	Ollendorf	Johnson 32	....	14:02	42.80	...	4
D-614 Saugatuck	S. Ollendorf, Jr.	Ollendorf	Johnson 32	....	14:10	42.30	...	5
B-115 Dillon	I. Dillon	....	....	....	D.N.F.	....	...	
B-1 Will Try	J. E. Wilkinson	....	....	....	D.N.F.	....	...	
B-31 Porteus	Doug. Haskins	....	....	....	D.N.F.	....	...	

MILE TRIALS RECORDS—LAKE QUINGSIGAMOND REGATTA

Class A, Division I—Bertram Steacie, Lockwood engine. Speeds for each of six runs, 27.840; 27.397; 27.692; 27.481; 27.692; 27.607. Average speed, 27.622 m.p.h.

Class A, Division II—Norman Kalat, Lockwood engine. Speeds fo reach six runs, 26.866; 27.068; 27.544; 27.027; 27.439; 26.866. Average speed, 27.135 m.p.h.

Class B, Division I—Elliot Spencer, Harrison & Wythe boat, Johnson B. Speeds for each of six runs, 39.173; 38.136; 38.015; 40.089; 39.779;; 40.178. Average speed, 39.217 m.p.h.

Class C, Division I—Miss Hilda Mueller, Century boat, Evinrude engine. Speeds for each of six runs, 37.305; 38.961; 38.055; 39.003; 38.544; 39.301. Average speed, 38.528 m.p.h.

Class C, Division II—Mrs. M. Hickey, Baby Whale boat, Johnson engine. Speeds for each of six runs, 40.089; 42.806; 41.860; 43.165; 41.909; 43.373. Average speed, 42.20 m.p.h.

Class D, Division I—Theodore Thompson, Penn Yan boat, Johnson D engine. Speeds for each of six runs, 43.689; 43.321; 42.755; 40.770; 42.704; 44.444. Average speed, 42.947 m.p.h.

Class D, Division III—H. Ross Maddocks, Baby Whale boat, Johnson engine. Speeds for each of six runs, 45.340; 46.814; 45.397; 46.875; 45.454; 46.059. Average speed, 45.973 m.p.h.

Class F, Division III—Ross Maddocks, Baby Whale boat, Evinrude engine. Speeds for each of six runs, 47.244; 48.387; 47.182; 48.649; 47.120; 48.715. Average speed, 47.876 m.p.h.

Competitive Records for Five Miles

Class A, Division I—Misstep, Bertram Steacie, at Lake Quinsigamond, May 29-30, Lockwood engine. Time 11:07. Speed 26.99 m.p.h.

Class A, Division II—Oh, Oh, Norman Kalat at Lake Quinsigamond, May 29-30. Lockwood engine. Time 11:37. Speed 25.82 m.p.h.

Class B, Division I—Toy, E. A. Spencer at Lake Quinsigamond, May 29-30. Johnson engine. Time 8:03. Speed 37.267 m.p.h.

WORCESTER REPEATS ITS RECORD SMASHING

(*Continued from page* 167)

and II had been arranged for members of the Worcester County Motor Boat Club and this together with two Class A races were run on Thursday afternoon after the conclusion of the mile trial attempts for that day. All races with the exception of the last two events on the program for large class F engines were over a distance of five miles or twice around the 2½ mile course. This first race was won by W. Harris driving a Baby Whale who succeeded in doing each heat in 8:35 a speed of 34.95 m.p.h. and annexing a point score of 800 thus winning the event. The second place winner was B. Steacie with a point score of 685.

The other Class A event was one for Division II drivers in which six boats took part. The winner proved to be Norman Kalat, driving his little boat Oh Oh and he was successful because he had a second and a first place in the two heats while Carl Mason winner of second place mustered only a first and a third place. All used Lockwood engines. The speed was exceptional considering the fact that the entire race was run during a pouring rain and the best heat speed of the winner was 25.82 m.p.h., a record for the class. The Division III race for Class A boats brought out only two starters and the heavy rain probably had something to do with this. Arthur Sutherland in a Cute Craft won the first heat at slow speed while the other competitor did not finish due to excessive rain. The second heat was called off entirely as the conditions were not favorable and the committee and contestants were thoroughly saturated by that time.

The program on Decoration Day started off promptly at ten o'clock in the morning with two heats of a Class A Division I race. Eleven boats started and finished with the winner Bertram Steacie taking both heats in succession. His best speed for the five mile run was at the rate of 26.99 m.p.h., also a new competitive record. All the motors used by contestants with a single exception were Lockwood Class A machines. The second event

(*Continued on page* 186)

HOOTONS WIN!

The Wildcat

A consistent winner in all weather. Speeds to 52 miles. Seats three with comfort and safety.

THE SAFETY-PLANE: Similar to WILDCAT but larger, for four persons. Mahogany decks. Upholstery. 50 m.p.h.

The 15-ft Vee-Plane

The easiest riding runabout in the world, and *seaworthy.* De luxe equipped. Seats five. Speed 40 miles.

THE RESORTER: A big, roomy family speeder for six. Beautiful lines, finest finish. Pointed bow. ALSO SNAPPY AQUAPLANES FOR ALL THESE BOATS.

MILWAUKEE-CHICAGO MARATHON

Norman Thomas of Racine driving Hooton Vee-Plane in Milwaukee-Chicago Marathon won second place Class C. Glen Johnson of Racine driving Hooton Vee-Plane won third in Classes D, E and F. Both drivers declare the Vee-Plane finest boat they ever drove. Ruggles Motor Service.

TERRE HAUTE, IND., MARATHON

Making 40 miles at an average speed of 40.5 m.p.h., Charles Washburn took 1st place, Class D, in a stock HOOTON WILDCAT.

ALBANY-TROY, N. Y., MARATHON

Harold Bresee, with gas pumps broken, stopped for fuel on each lap and drove his WILDCAT with big F motor to a glorious second. (His plucky performance was the talk of this 5-lap seventy-five mile marathon.)

Also closed course races at Brunswick, Mo.; Cleveland, O; Canton, O.; and dozens of others in all sections. Hooton boats have won more than 400 races and are going strong.

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RACING AND PLEASURE BOATS

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For Class I and Outboard Boats
The sturdy one-piece construction of this light makes it ideal as a towing post. Made in one-piece casting; brass or aluminum highly polished.

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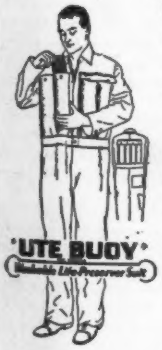

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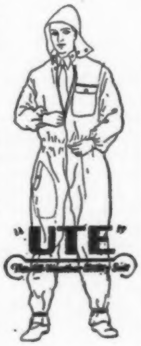

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OUTBOARD MOTOR BOATS—A complete line of strictly up-to-date racing models. Also some entirely new speedy models for general pleasure use. Built strong and durable and absolutely safe.

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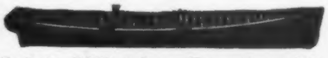

Rowboats $48.00 and up—The most complete line ever offered, at real money-saving prices.

20 ft. Motor Boats—For 6 passengers. With or without engine. Fast, handsome Craft at money-saving prices.

THOMPSON BROS. BOAT MFG. CO.
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Balubricote's Friends Are Fast— for Theirs are the Faster Boats!

In every boating center all over the world, you'll find the Balubricoted bottom a habit with outboard drivers who are out for faster speed.

10% More Speed for You

Whether or not you race, you take pride in the speed of your boat. Twice over the bottom with Balubricote and she'll make up to **10% more miles per hour.**

Balubricote is easy to apply and is good for a season. It reduces water friction to a minimum. A quart covers 140 square feet and costs only $2.50

Ask your dealer for Balubricote or send your order direct to

BAHL CHEMICAL CO.
194 Elm Street Fall River, Mass.
Attractive Proposition for Dealers and Jobbers

WORCESTER REPEATS RECORD SMASHING

(*Continued from page* 184)

of the day was a Class B race for Division II drivers. This was closely contested between Ed. Dority and Mrs. M. Hickey. Dority won the first heat with the fastest speed of the entire race with Mrs. Hickey a close second. In the second heat Mrs. Hickey finished first and the best that Dority could do was fourth place and on the point total Mrs. Hickey beat him with 761 points against 689. The fastest heat was made by Dority at the rate of 34.88 m.p.h.

A Division I event for Class B drivers followed closely and brought out nine contestants. There was very little competition to this as E. A. Spencer with his little boat Toy took both heats in quick succession with a difference of only two seconds in his time in each. He secured 800 points with W. Harris winning both second places and 722 points. The time established in the best heat was 8:03 or a speed of 37.267 which is a new competitive record for five miles in this Class and Division. Johnson motors were used by the winners.

The first events of the afternoon began to bring out the larger Class C engines and ten contestants tried for the Division I honors in this class. W. Jankowski was successful in winning the first heat with a Johnson powered Flower boat, while J. S. Swingle with Bay Bee won the second heat. His time was the fastest of the race, 7:51 equivalent to 38.216 m.p.h. Unfortunately he did not start in the first heat and the winner on points proved to be Hilda Mueller of Bay City, driving an Evinrude powered Century Hurricane who acquired a total of 650 points. She was not allowed this place, however, as her boat was found to be under weight and the award went to A. Johnson driving a Baby Whale, also with an Evinrude engine who was in second position on points. In the second heat of this race two of the contestants were so anxious to get over the line promptly that they beat the gun by an appreciable amount and were disqualified.

The Division II drivers in class C failed to heed the lesson of the disqualification for beating the gun and in the first heat of this event three of them did the same trick and lost out. Mrs. Mildred Hickey was the outstanding performer in this race, since she took both heats in succession with a total point score of 800. Second place went to an Ollendorf Hydrofoil with a total of 617 points. Mrs. Hickey in her Baby Whale made one five mile heat in 7:40 which is 39.13 m.p.h. Seven contestants took part in this event with both winners equipped with Johnson engines.

Class B again appeared on the program with a race for Division III drivers and five of these appeared to contest for the honors. B. Tuck of Philadelphia, driving a Ludington boat with a Johnson engine took both heats in quick succession with 800 points total score. His best time was 37.34 m.p.h. The second place winner was J. E. Wilkinson of Boston with 650 points which he secured for winning a second and fourth place.

The large class D engines were now to race in a Division II event and five boats faced the starter. Of these one failed to finish the first heat and did not start in the second leaving only four contestants. Mrs. Hickey and Bob Warner both driving Baby Whales, one with a Johnson engine and one with an Evinrude engine, battled for the honors with first one and then the other in the lead. The crowd of spectators grew most enthusiastic about this event and cheered their favorites. Mrs. Hickey took the first heat with Warner second, while in the second heat she ran into difficulties and Warner won the heat with Mrs. Hickey fourth. The point score total 761, awarded first place to Bob Warner with Mrs. Hickey close behind with 689. The best speed was made by Mrs. Hickey during the first heat which she covered at the rate of 38.297 m.p.h.

A similar event for Division III drivers in Class B followed and once again eight men faced the starting flag. The winner, as before was determined by the point system yielding a tie for first place between Geo. Pauli, Jr. and Marshall Eldredge with a total of 724 each. The race went to Pauli since his total elapsed time for both heats was better than that of his rival. The time made by Eldredge in the first heat was slow so that he was unable to overcome this handicap and lost the chance of the first prize by a mere five seconds. All drivers in this event used the big Johnson 32, while Pauli drove a Century Cyclone and Eldredge a Baby Whale. Third place went to Ross Maddocks with 722 points, since his Ludington Flash finished in second place in both heats.

The last two events of the day were open to the largest Class F engines and were to be longer races than the previous five

The first of these for Divisions I and II were mile contests scheduled for fifteen miles while the second for Division III was reduced to ten miles when the drivers complained that their fuel tanks would not carry sufficient fuel for a continuous fifteen mile run. Eight drivers started and the going was fast and

(*Continued on page* 188)

THE · FAYBOW · "MIDDY"

SMARTEST OF OUTBOARD CRAFT

In appearance the 16 foot FAYBOW "MIDDY" lacks nothing to be desired. Its beautiful lines and handsome all mahogany, brass-trimmed construction give it the smart look of a larger and more costly craft.

This model is exceptionally seaworthy at all speeds—capable of 34 miles an hour—and it can be turned about in a boat's length without shipping water.

Brass screw and copper fastened and plugged. Upholstered seats with restful backs. Accommodates 6 or 8 persons. Just the boat for all around use—and built for long, rough or calm water service.

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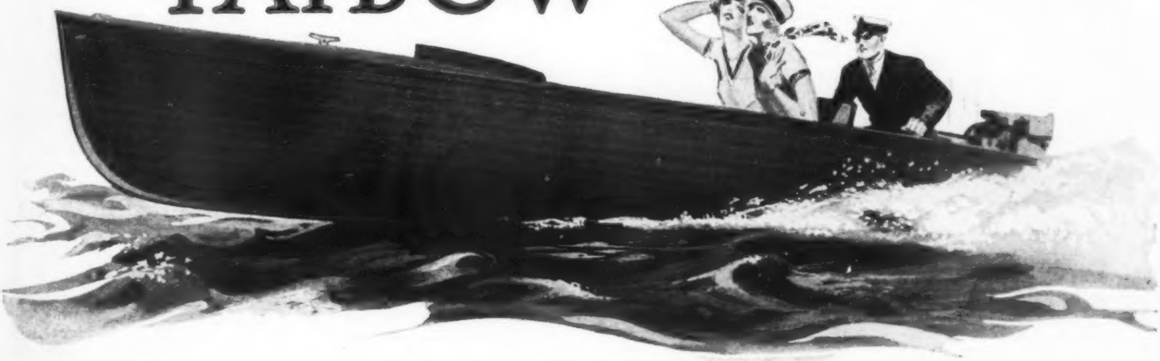


M. V. P. B. A.'S ANNUAL REGATTA

The program of events on the entry blanks for the 23rd annual national regatta of the Mississippi Valley Power Boat Association, to be held on the Ohio River at Madison, Indiana, July 4 and 5, schedules thirteen races. The classes were selected at a conference between members of the Madison regatta committee and officers of the M. V. P. B. Association on May 11. Besides the standard hydroplane classes, which include the two for 151 cubic inch displacement hulls and the 510 and 725 cu. in. types, the program calls for three runabout races; one for power cruisers and four for outboard-motored hulls. The runabout division provides a race for the recently popularized 55 horsepower, or under, models which made such a fine showing during the recent Albany-New York Hudson River race. This class is expected to draw heavily from patrons of boat building companies which are now specializing on this small type of hull. In all probability one or more of these companies will offer trophies to be won in this class.

As cash prizes will be paid, the outboard division has three events in which Division III drivers will participate and one in which only Division II drivers will take part. This arrangement provides classes for competitors in the outboard field who race for money and those who do not.

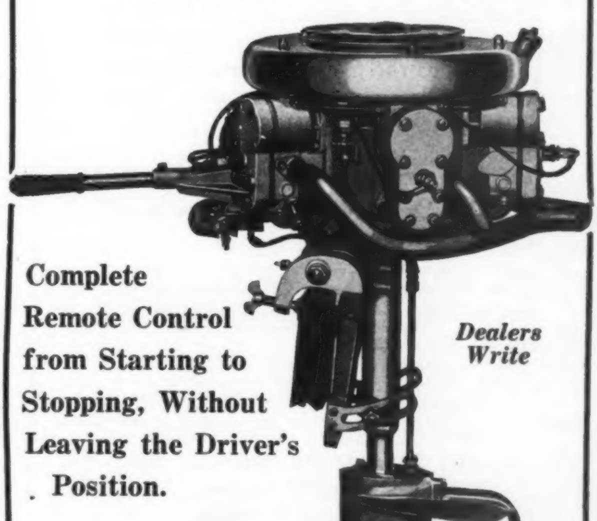
Circulation of entry blanks began on May 20, simultaneously from the offices of Secretary A. T. Griffith, 337-8 Hippodrome Bldg., Peoria, Illinois, and George Hall, Secretary of the Chamber of Commerce, Madison, Indiana, and may be had from either of those offices. The races are open to any member of any recognized boating organization in the country, whether or not it is affiliated with the M. V. P. B. Association.

PRESENTATION AT BERGEN BEACH

On the occasion of the Going into Commission ceremonies of the Bergen Beach Yacht Club, Bergen Beach, New York, Commodore Wm. H. Pynn retired from that office after serving the club faithfully and well during three previous years. The membership of the club in appreciation of his good work and as a mark of esteem presented to him a wonderful combination set made by the Waterbury Clock Company and consisting of a Waterbury shipsclock, barometer and thermometer. The instruments were all mounted on an attractive base in the form of a desk set. Over two hundred guests were present at the presentation and dinner which followed.

CROSS OUTBOARD MOTORS

with Electric Starting



Complete Remote Control from Starting to Stopping, Without Leaving the Driver's Position.

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CROSS GEAR & ENGINE CO.
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RECORDS CRASH
at Elsinore
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Lake Elsinore, April 6, 1930, H. G. Ferguson, world's premiere outboard pilot, set a new Class D-II, 5-mile record in competition here, averaging 43.16 m. p. h. driving "Blue Streak"—the hull of his choice, a standard 190-lb. Elsinore step hydroplane.

Stockton, Calif., June 1, 1930. H. G. Ferguson broke the National Class D-II record at the official A. P. B. A. speed trials here, averaging 46.99 m.p.h. and the Class C-II record 44.88 m.p.h. Former records were 41.86 and 42 m.p.h. respectively.

All competitive events in Classes B, C and D were also won by Elsinore standard models.

This is not high-powered advertising but a statement of facts which speak for themselves.

We sell you the same model identical with "Blue Streak" and do not misrepresent by using freak racing outfits.
For particulars write:

LAKE ELSINORE BOAT WORKS
ELSINORE CALIFORNIA

WORCESTER REPEATS RECORD SMASHING

(*Continued from page* 186)

furious during the entire race. W. B. Harris ran into difficulties after the first lap and dropped out. Another contestant dropped out during the fifth lap and Mrs. Hickey ran out of fuel on the last lap and could not finish. The time of the winner was 22:56 and Bob Warner driving a Penn Yan boat with an Evinrude Class F engine was awarded the prize for this race at a speed of 39.22 m. p. h. Second place went to R. K. Griffin, driving a Baby Whale with a Johnson Class C engine, which averaged 38.65 m.p.h. He was closely followed by Theodore Thompson in a Penn Yan boat with a Johnson Class D engine at a speed of 28.60.

The Division III event open to Class F engines also brought out eight starters of whom only five succeeded in finishing the ten miles of the race. George Pauli, Jr., with a Class D Johnson powered Century boat won the event with a speed of 44.47 m.p.h. Ten seconds later Ross Maddocks crossed the finish line with an Evinrude Class F on his Baby Whale with a speed of 43.80. J. E. Wilkinson in an effort to win this race had attempted to drive a little Class B boat with a monstrous Class F engine. The combination did not synchronize and he turned over during the first lap. During the third lap Doug Haskins turned over and I. Dillon dropped out during the fourth and last lap.

This brought to a close a busy day of racing and in view of the desire of many contestants to make mile trial attempts, the officials agreed to serve again on Saturday to carry on this work. The details of these attempts are mentioned earlier in this article. A summary of the entire program with data on the records which were accepted as new world's records appears on 182 and 184.

LOOKING INSIDE THE OUTBOARD ENGINE

(*Continued from page* 172)

and so to the opening L into the oil reservoir. Air enters the oil reservoir through the tube D2, passes into L carrying oil with it, through the pipe H, into E2, along the passages into the crank pin. There the air can escape through F2 while the heavier oil is carried by centrifugal force out through J2 to the surface of the crank pin.

There is no rapid flow of oil through these openings and passages, such as there is in an automobile engine lubricating system where a pump may circulate the oil under twenty or thirty pounds per square inch pressure. There is, however, a constant movement of oil globules and air through the system, and since there is an impulse every revolution of the crank shaft, it will be seen that the movement at a speed of 4,000 revolutions per minute, can be sufficiently rapid to supply adequate amounts of oil to all the bearings.

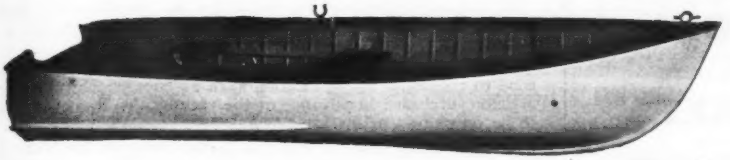
Oil leakage from the lower main bearing is not serious since it simply drains away into the drive shaft casing. But oil leakage from the upper main bearing finds its way into the magneto—if one is used—or at least runs down over the outside of the crank case. Oil on the breaker points of the magneto causes excessive sparking at that point, rapid deterioration of the points, and a weak spark to the spark plugs.

To avoid excessive oil escaping from the upper main bearing, an annular groove is cut in the bushing a short way from the top, M. There is a shallow groove cut into the crank shaft, G, connecting with another groove N cut only part way around the bushing lower down, and having a connection with the crank case. The crank shaft groove G registers at its upper end with the annular groove M all the time, but with the groove N only during the suction stroke of the crank case. Thus, suction pulls the accumulation of oil in groove M down through G, into N, and into the crank case. This is simply an ingenious oil-return arrangement utilizing the crank case suction without new additional parts.

When, under extreme conditions such as racing, it is desired to feed fresh oil to the main and connecting rod bearings, it is simply necessary to eliminate the oil collecting pockets B and B2 and their respective passages in the crank case bottom; to connect a pipe to the passage K to the lower main bearing and another to K2 in the upper main bearing (pipe H being disconnected); and to then attach ordinary drip lubricators to the two pipes. It is necessary, however, to drill a small air-hole into the pipe just below the lubricator so that air as well as oil may be drawn into the bearings and the passages. Oil mixed with the gasoline is continued to insure adequate lubrication of the pistons and cylinders though it is possible to use a somewhat smaller amount than before.

The bearing of the connecting rod on the piston pin is taken care of by drilling a fairly large hole in the upper end of the

"HARPOON" *Outboard Boats*



THE YACHT TENDER

For A, B and C motors. Bronze hoisting eyes and oar locks—copper and brass fastenings—like all Harpoons. 12 ft. x 52 in—175 lbs. $210.00

THE RUNABOUT

For B, C, D and E motors 16 x 4½ ft.—225 lbs. . . . .$330.00 With steering gear and controls installed. $350.00

and

THE SPORTSMAN'S OPEN BOAT 16' x 4½', 190 lbs.—$235.00

The fast, seaworthy Runabout hull with arrangement simplified for hunter and fisherman.

Offered to the trade by both

Some territory still available

THE DESIGNERS AND THE BUILDERS

GEORGE F. CROUCH, INC.
(Naval Architects)
MIDDLETOWN, CONN.

On the Connecticut River

PRATT, READ & CO.
(Established 1806)
DEEP RIVER, CONN.

Particulars upon request

LOOKING INSIDE THE OUTBOARD ENGINE

rod. This catches enough of the ever-present oil vapor to adequately lubricate these parts where the relative motion is oscillatory only.

The gears driving a rotary valve are within the crank case and therefore get plenty of oil. The rotary valve bearings are of the anti-friction type, balls, and need very little oil, which little the top one gets from the crank case, the lower one from the in-going gas and oil mixture.

There are no other moving parts about the power head and consequently no oil holes or grease cups are necessary. The breaker mechanism in the magneto needs little if any attention as it is usually provided with an oil-saturated felt wick or packing.

In the Drive Unit there are at least three bearings and two gears working under high speed and great pressure. Lubrication of these parts is somewhat of a problem. Engineers have long endeavored to find ways of keeping the lubricant in and the water out. The best answer seems to be long close-fitting bearings, particularly at the propeller end.

The gear housing is packed with a light grease or heavy oil. This lubricant should be sufficiently soft to constantly flow onto the gears and into the bearings. It should not harden at low temperatures—sometimes a motor is used in water very close to the freezing point. Neither should the lubricant get too liquid at higher temperatures or it will quickly find its way out through the bearings and away. Perhaps one of the most important characteristics of the lubricant is this: that it should not easily emulsify with water. When some oils or greases are vigorously stirred with water—as they will be inside the gear case of an outboard motor—a frothy emulsion results. While this has some lubricating value, it certainly is inferior to the pure lubricant.

The best gear case lubricant so far discovered seems to be a compounded grease of a very sticky consistency. It is probable that such compounds contain some animal fat, some soap, perhaps, and some rosin. It looks and acts something like old-fashioned axle-grease as used on horse-drawn vehicles. For some reason it is very difficult to mix this compounded grease with water. The water seems to remain clear, separate from the grease, and may be drained off. There are several private brands of such lubricant on the market. In lieu of one of these, a heavy oil such as is used in the rear axle of an automobile may be used with good results.

Maintaining lubrication is probably the one most important thing that an outboard motor operator has to do. He must select a high grade oil and mix it with the gasoline in the right proportions as specified by the manufacturer of the motor. It should be mixed thoroughly in a separate clean can—oil poured directly into the gasoline tank, whether the tank contains gasoline or not, may run directly into the outlet and clog the strainer, the gas line, and the small passages in the carbureter.

To maintain lubrication in the Drive Unit, the operator must inspect it frequently and replenish when necessary. He should try to procure and always have on hand a supply of the grease recommended by the manufacturer of the motor. At intervals it is well to wash all lubricant from the gear case with gasoline and fill completely with a new supply of grease.

(To be continued)

JOHNSON DEALERS MEET

Effectiveness of the new distributor system of the Johnson Motor Company, Waukegan, Ill., is now being demonstrated in the fact that Johnson dealers in every section of the United States were enabled to meet together in sales meetings.

In the past it was impossible for all dealers to make a trip to Waukegan in the spring for a discussion of the new sales plans and study of improvements made for the season. Geographical separation prevented the dealers from the exchange of sales helps and instruction common to these meetings.

More than twenty meetings will be held by the distributor organizations throughout the United States.

"We feel that this plan will work out to the better satisfaction of the dealer in more ways than one," said E. S. Barber, vice-president, in making the announcement for the meetings. "In the first place, the dealer will not have so far to travel, and it will not keep him away from business for so long a time. He will, by attending these meetings, accomplish the same results as if he were at Waukegan. In fact, he could accomplish even more, for he will be dealing with his distributor and the Johnson representative in his territory who are both better acquainted with the local situation than we here at the factory."

We Specialize in All Types of Aquaplanes

AQUAPLANES

Scientifically designed, beautifully balanced, for towing—

SKIBOARDS

(Patents Pending)

The outboard-motor-propelled aquaplanes—

AKWA-SKEES

(Patented Oct. 17, 1925)

The sporty self-balancing double aquaplanes—

SURF-BOARDS

Standard type and genuine Waikiki Model—

DOLPH

A game played on Akwa-Skees, Skiboards and Aquaplanes

Interesting Proposition for Outboard Boat and Sporting Goods Dealers

Speed Model Akwa-Skees

Write for details and discounts.

SKIBOARD CORPORATION

72 HUBBARD STREET BROOKLYN, N. Y.

National Distributors of Water Sports Equipment

Skiboards make thrilling races.

WILKINSON wore a KAPO KANTSINK SAILORBUOY

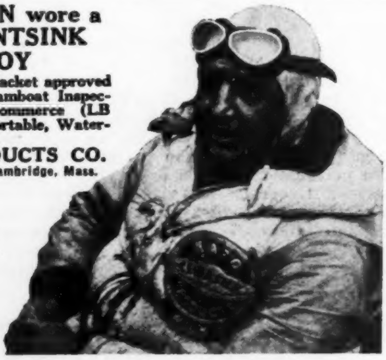
The only Kapok Jacket approved by the U. S. Steamboat Inspector, Dept. of Commerce (LB 2948). Safe, Comfortable, Waterproof. Now $11.00.

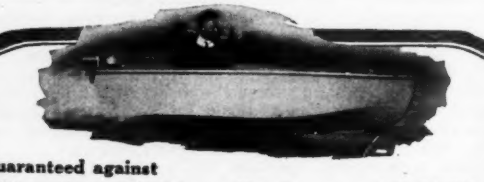
KAPO PRODUCTS CO.

151 2nd St., E. Cambridge, Mass.

KANTSINK KAPO CEIBASILK PRODUCTS LIFESAVING EQUIPMENT

For Safety's sake look for this trademark. Beware of imitations.





Guaranteed against

Blistering, Flaking, Peeling or "ROT"!

Add to superior design and construction a finish which is guaranteed not to flake, peel, blister or "burn" and you have an idea of the 1930 PENN YAN Dinghies! Half the weight of wooden boats after a few weeks of service . . . faster, easier to handle and smoother under way . . . require no care, no caulking, and never leak! Whether it's a moto-dinghy, sailing dinghy or rowing dinghy, if it's made by PENN YAN it is the finest dinghy value offered today. Write for our illustrated folders on PENN YAN Dinghies and PENN YAN Racing Craft.

PENN YAN BOAT CO., Inc.

15 Water Street Penn Yan, N. Y.

PENN YAN DINGHIES

DRIVERS GET CONCESSIONS

(*Continued from page* 176)

advance of the race and shall not start in the incorrect division.

8. No free-for-all races shall be held.

9. No merchandise prize (or order for merchandise) having a value in excess of $50.00 shall be offered in Division I or Division II.

(Note: It is understood that this section (9) has no reference to the usual prizes offered, such as cups, trophies, etc., and articles purchased in advance of the race by the Race Committee to be offered as prizes.)

10. The prize shall be awarded to the owner of the boat. The owner may, if he so chooses, instruct the Race Committee to award the prize to the owner or to the driver.

11. Expense money cannot be offered in lieu of prize money in Division I or Division II except paid to all contestants equally. Expense money in these Divisions must be paid by one who would be classified as a Division I or Division II owner or driver. Expense money in Division III cannot be paid by one classified as a Division IV driver or owner. Expense money must not exceed in amount that which is provided by A. A. U. (See note.)

Note: A. A. U. ruling on above: Traveling expenses are limited to first class railroad fare, including parlor car and single berth sleeping car fares actually paid, amount actually paid for meals and lodging and which shall not exceed $8.50 per day in any case during the time necessarily occupied in going and returning from a regatta. In cases where the regatta is more than 150 miles from the driver's home, expenses may also be allowed for not more than one day before and day after the regatta unless a longer period is espcially approvd by the Racing Commission. To the above expenses may be added money actually paid for boat and motor transportation.

Note: Race Committee must designate their various events as open to Division I or Division II or Division III or Division IV drivers. In no case shall any event be arranged as a so-called "Free for All." Division I and Division II drivers may compete in the same event provided the race be designated in advance as open to "Division I and II Drivers." However, Division I and Division II shall not compete in any event open to Division III drivers, or vice versa.

In cases where the number of entries do not warrant the starting of Division I, II, III and IV at separate times, the Local Race Committee may, if it so desires, start two or more Divisions at the same time, provided, however, that each Division is competing separately and by itself for separate prizes.

12. Free service at Regattas ONLY may be given to all contestants by a Division IV owner or driver or one who would be classified as a Division IV owner or driver.

Rule XXII—Official World's Outboard Records

1. Official World's Outboard Records will be awarded in Division I and Division II and Division III to the drivers of boats with the fastest speeds to date as follows:

Note: All records made to date under 1930 rules to be recorded as official and the publication of all 1929 records to be allowed as such until December 31, 1930.

First. In competition.

	Division I	Division II	Division III
Class A	5 miles	5 miles & 10 miles	5 miles & 10 miles
Class B	5 miles	5 miles & 10 miles	5 miles & 10 miles
Class C	5 miles	5 miles & 10 miles	5 miles & 10 miles
Class D	5 miles	5 miles & 10 miles	5 miles & 10 miles
Class E	5 miles	5 miles & 10 miles	5 miles & 10 miles
Class F	5 miles	5 miles & 10 miles	5 miles & 10 miles

Second. One Mile Trials in All Classes in Division I, II and III.

16. A motor which establishes an official outboard motor record shall be torn down, inspected and measured by a person appointed as inspector by the Outboard Motor Manufacturers Trade Association.

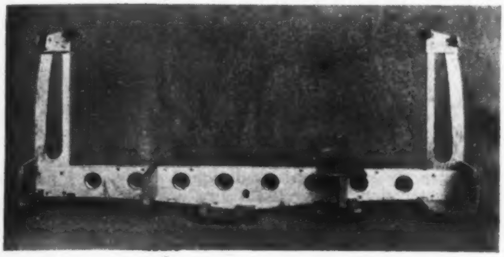
In sanctioned and unsanctioned races where records are not at stake the inspection of motors shall be invested in a Committee of drivers appointed by the National Outboard Race Drivers Association if so requested by an official representative of the drivers Association.

Note: It is understood that these changes as well as other portions of the racing rules where the above changes apply that said changes shall become effective at once, May 27, 1930.

In cases of regattas already planned at which the Local Race Committee feels that it is impracticable to put the above rules in effect, permission is hereby granted to conduct said regatta in accordance with the old rules.

Chase-Emersons Gain Lightness, Sturdiness From Airplane Type of Frame Construction

Stern Drive Engine Installation Increases Seating Room and Ease of Handling



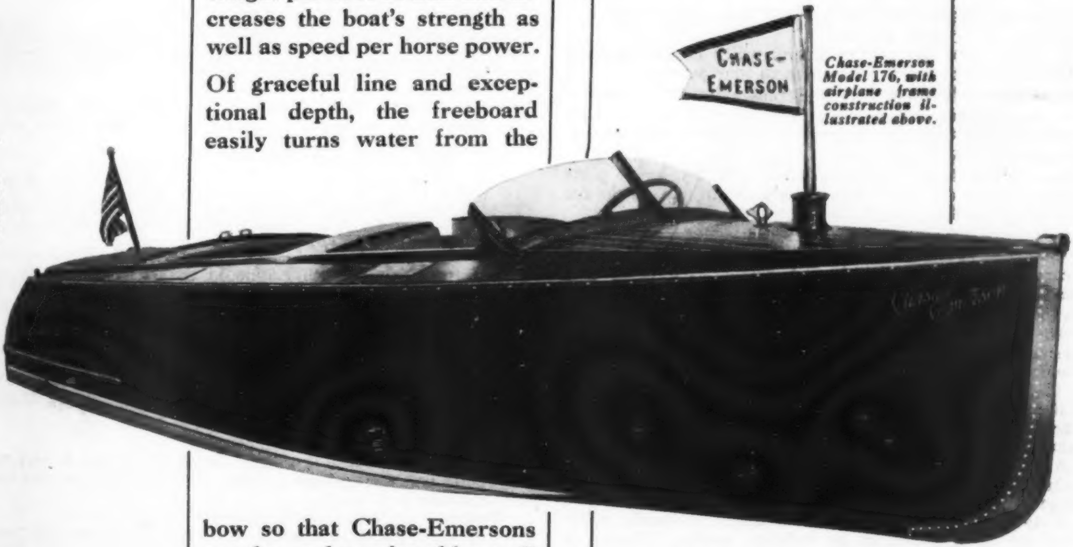
Famous Airplane Frame Construction used in Chase-Emerson Motor Boats

The special frame design employing airplane construction, an exclusive feature in Chase-Emerson motor boats, reduces weight per foot of hull and increases the boat's strength as well as speed per horse power.

Of graceful line and exceptional depth, the freeboard easily turns water from the bow so that Chase-Emersons are dry and comfortable at all speeds. Additional comfort and ease of handling are assured by the stern drive installation of the engine. Loads are evenly distributed and the tendency to nose-dive sharply reduced.

One large roomy cockpit—6 to 7 feet from instrument board to engine bulkhead, depending upon type of engine. Passageway between cockpits. Large locker space. Cushions of selected water-proof fabric of life preserver type, colored to harmonize with boat finish. Self starter, reverse gear, ignition lock, and electric horn.

Price range: $995 to $1395, F.O.B. Norwalk, Ohio, depending upon type of engine installation and size of hull, 16 ft. and 17 ft., 6 in. Send coupon for further information.



Chase-Emerson Model 176, with airplane frame construction illustrated above.

A. B. CHASE-EMERSON CORP.

11 West 42nd Street, New York City. Factory at Norwalk, Ohio.

RETURN COUPON!

A. B. CHASE-EMERSON CORP.
11 West 42nd Street
New York City

Gentlemen: Please send complete information regarding Chase-Emerson motor boats, with airplane type of frame construction.

Name ....

Street ....

City.......................... *State*..................

MOTOR BOATING'S Ideal Series

Volume X

The Outboard Motor Boat Book

Plans, Specifications and Building Instructions for Over 30 Craft of Various Types and Sizes Suitable for Powering with Outboard Motors

THIS is the book which everyone has been waiting for. The scope of the craft, plans, specifications and building instructions of which are printed in this volume, is very broad. Everything is included from the smallest rowing dinghy suitable for a Class A Outboard Motor up to the fastest Class C racing hydroplanes. Plans of some of the outboard racing boats which have established world's records are included. All of the boats are easy for the amateur or novice to build. If you wish to use the boat on the seaboard or inland waters or on some lake or smaller body of water you will find a design which is suitable. If you are partial to sail and use the outboard as an auxiliary to get home with should the wind fail, you will find a number of designs of these boats, too. The plans and designs are particularly clear and easy to understand and no previous knowledge of boat building is necessary to turn out a successful boat. You should not fail to have a copy of this book.

THE CONTENTS OF VOLUME X

RINKY-DINK, A 7-FOOT PRAM
A useful little dinghy for carrying one or two persons between the shore and the larger boat.

PIRATE, A MODEL SLOOP
A complete design for constructing an excellent little model sailing sloop which can compete in model races.

SKIPPER, AN OUTBOARD PRAM
An easily built little flat bottom speedster suitable for outboard engines in the smaller sizes, which will produce speeds up to about thirty miles.

HANDY-ANDY, A SAILING DINGHY
A simple little round bottom design fitted with a single sail which will furnish ideal sport for the skipper who is spending spare time while his larger vessel is at anchor.

JAN, A SAILING SKIFF
A ten-foot flat bottom design which will serve equally well as a dinghy, sailboat and outboard engine tender.

CARRYME, A UTILITY DINK
A useful little flat bottom dinghy which is easy to build and which will carry from three to four persons.

APPLE SAUCE, A FAST LITTLE SPEEDSTER
A simple little design for a fast outboard racer, which will do over thirty miles per hour with a suitable engine.

TAKAPART, A FOLDING PUNT
An original design for a small boat which is easily portable. Made in three sections which fit one inside the other so that it can be carried on an automobile.

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An excellent design for a 10-foot row boat arranged to carry three or four people and which can be used with any of the smaller outboard engines as a boat tender.

NYMPH, A 10-FOOT SAILING DINGHY
An attractive little boat fitted with a large sail and center board which will enable it to sail very nicely and which is also arranged to handle an outboard engine.

A 12-FOOT DINGHY
A first class design for a slightly larger outboard engine tender capable of carrying four persons.

JAZZ BUG, 12-FOOT HYDROPLANE
A fast little hydroplane which will handle engines of class B and with which it should do thirty miles.

SMARTY, A UTILITY BOAT
A 14-foot flat bottom dinghy arranged to handle under sail or under power of an outboard engine. Should be able to carry at least six people.

BUSTER, A 12-FOOT SAILING DINGHY
A round bottom dinghy of somewhat larger size, arranged for both sail and outboard engines.

SNAPPER, A SAILING DINGHY
A smart little round bottom tender, which can be used for much useful service in pleasure or work.

GANNET, A COMBINATION DINGHY
A roomy round bottom sailing skiff with a dagger type centerboard and a large main sail. Will handle nicely under sail and can be used with an outboard engine also.

GREEN DIAMOND, A FAST OUTBOARD
A 13-foot V-bottom hydroplane which has performed well in competition. It is designed for the modern fast outboard engine and should do 35 miles per hour quite easily.

DANCER, A 12-FOOT DINGHY
An inexpensive little boat designed particularly as a substantial flat bottom row boat for tender and ferry service.

WHIZ, A BABY HYDROPLANE
A sporty little speedster designed particularly for amateur construction arranged for use with an inboard engine of 20 h.p. with which it will do 30 m.p.h.

BABY STEPPER, A 14-FOOT OUTBOARD PLANE
A well tried and proven little design for a speedy outboard engine racing boat. Will handle engines up to class C with which the highest speeds will be secured.

SCANDAL, AN OUTBOARD MOTOR BOAT
A flat bottom dinghy 14 feet in length which will be suitable for tender service and similar work.

PIXIE, A V-BOTTOM ROW BOAT
A very able design for a large roomy row boat, capable of carrying a large load in passengers or baggage.

NONPAREIL, AN OUTBOARD ENGINE CRAFT
A design generally similar to that of Pixie but decked over for the greater part of its length so that it is much more sea-worthy and able.

MARYBELLE, A 14-FOOT RUNABOUT
An excellent little design for a useful little runabout, designed to be driven by an engine of about 10 h.p. with which it will perform very well.

SUE, A MOTOR SKIFF
A broad beamy 15-foot motor skiff arranged for an inboard engine of 5 to 6 h.p. With this it will do 6 to 7 miles per hour and will carry a very heavy load.

EDITH, A HAND 15-FOOTER
A V-bottom design for an attractive little runabout arranged with a small engine in the stern and passenger space forward.

TOTO, AN OUTBOARD RUNABOUT
An inexpensive and easily built 16-foot runabout designed particularly for the modern outboard engine. An able little craft which will carry five persons comfortably.

FLATTIE, A 16-FOOT UTILITY BOAT
A simple little flat bottom skiff designed for a small single cylinder engine, practical for many kinds of service.

WHIZ, AN OUTBOARD SPEEDSTER
A 16-foot stepless outboard speedster which is easy to build and fast enough for any one who does not care for extreme high speeds.

TRANSCO, AN OUTBOARD RUNABOUT
A sturdy and substantial 16-foot boat, built with lapstrake planking on a round bottom design. This boat will make a very able job for long cruises.

SEA SHELL, A SERVICEABLE BOAT
An excellent design for a 17-foot round bottom boat, suitable for rowing, sailing, or an outboard engine.

CANVAS-BACK, A CANVAS-COVERED CANOE
This design follows the typical canoe style of construction and has a square stern which adapts it to the use of an outboard engine. The boat is 17 feet in length and has a beam of 3½ feet.

GOZO, A PETITE SLOOP
A pretty little design for a 16-foot auxiliary sloop arranged for a small inboard engine. The cabin arrangement provides berths for two persons and this little boat will make an excellent cruiser for the young fellows.

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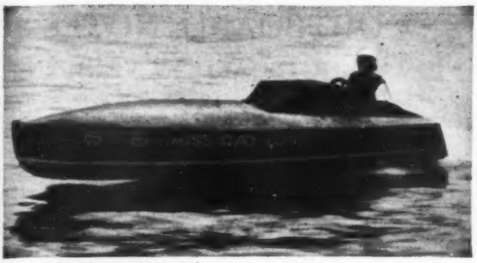

MISS DAYTONA

Two of our hulls were in Florida last Winter.

Miss Daytona gave a fine showing in the unlimited 151 class.

Vampire brought home four prizes from the four races in which she was entered.

We build very few boats but we take great pride in those we deliver. Whether you want a racing hull or a family pleasure boat, we can be of service to you.

BRUNO BECKHARD
Flushing Bridge, Flushing, L. I., N. Y.

Authorized Long Island Service
for Johnson Motors

PHILIPPINE MAHOGANY

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BLACK & YATES

Is Used as Standard by the Leading Manufacturers of Outboard Boats, Runabouts and Cruisers for the Following Reasons:

1. Beautifully figured
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Black & Yates Philippine Mahogany is imported directly from the Philippine Islands, *duty free*, to our Brooklyn, N. Y., yard, where over 2,000,000 feet of clear, thoroughly air-dried and seasoned lumber is carried at all times for immediate shipment.

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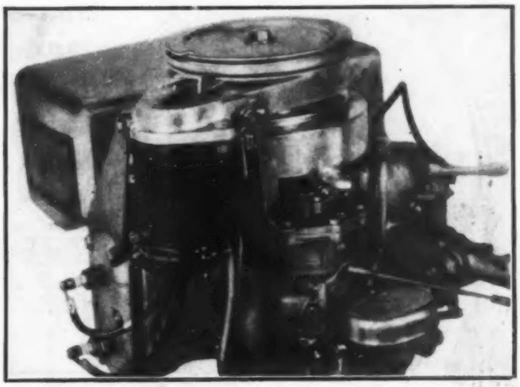
ELECTRIC STARTER

to fit on any Outboard Motor



Onan Electric Starter installed on 1929 Johnson 4-cyl. Sea-Horse

Here is a POWERFUL, LIGHT-WEIGHT 6-volt STARTING UNIT. Weighs approximately 14 lbs. Complete with fittings for attaching to any Outboard Motor.

With an ordinary 6-volt battery, this will crank an Outboard Motor at 350 R. P. M. Starts it like the starter on an automobile. Can be installed by anyone—no fitting or machine work necessary.

Each STARTER is guaranteed and is sold on ten days trial. PRICE ONLY $42.50. Can you afford to be without the COMFORT, CONVENIENCE and PLEASURE of an ONAN ELECTRIC STARTER? Write for details.

DEALERS:—Some territory still open

D. W. ONAN & SONS
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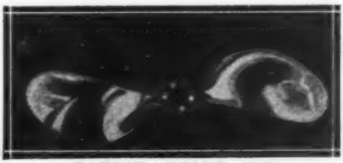

PATENT APPLIED FOR

VICTORIES

Won with Stannus Propellers

J. E. WILKINSON WON
Albany to New York Marathon

H. G. FERGUSON MADE
16 Records in 1929
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EARL GRESH MADE
41 Straight Wins in 1929
with same wheel

EUROPE { Laros Motors, Italy, beat all previous European Records, May, 1930

STANNUS PROPELLER CORPORATION
FOR SPEED

4089 BEAUFAIT AVENUE
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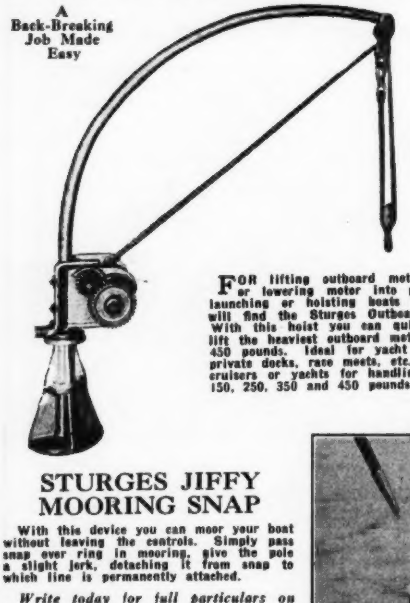
For Outboard Users

A
Back-Breaking
Job Made
Easy



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Boat
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Hoist

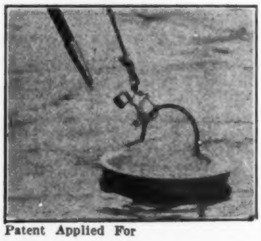
FOR lifting outboard motors from hull to dock or lowering motor into place on hull, and for launching or hoisting boats out of the water, you will find the Sturges Outboard Hoist indispensable. With this hoist you can quickly, easily and safely lift the heaviest outboard motor and any boat up to 450 pounds. Ideal for yacht clubs, service stations, private docks, race meets, etc. May also be used on cruisers or yachts for handling dinghy. Four sizes, 150, 250, 350 and 450 pounds capacities.

STURGES JIFFY
MOORING SNAP

With this device you can moor your boat without leaving the controls. Simply pass snap over ring in mooring, give the pole a slight jerk, detaching it from snap to which line is permanently attached.

Write today for full particulars on Sturges efficient boat handling aids. Also manufacturers of

STURGES DINGHY LINE CONTROL
STURGES ANCHOR HOISTS



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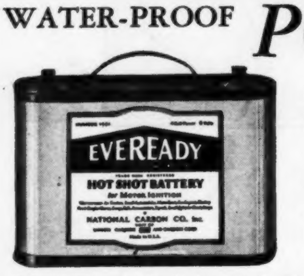

EVEREADY Hot Shots defy rain, waves and hard knocks. In 6, 7½ and 9 volt sizes. Sold in every port.

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General Offices: New York, N. Y.
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METAL BOATS
OUTBOARDS AND ROWBOATS
Eight models, for every outboard service anywhere. The most economical boat buy on the market—first cost is the last. Lifeboat safety, comfort, luxury. Prices as low as $130. Investigate! See Mullins Boat Book.

MULLINS MANUFACTURING CORP., SALEM, OHIO

OUTBOARD NOTES

THE OUTBOARD IN VENEZUELA

Growth in popularity of outboard motors in Venezuela is attested by a letter received from a subscriber, Roy Fuller, in this South American country. The letter follows:

"The reading of good motor boat magazines here would help to create or increase the foreign market for American-made boats. Johnson outboards are getting a very good foothold in this part of Venezuela now, and the merchants in Maturin are using two 16s to push their ten-ton flat freight boats upstream in the rainy season when trucking is impossible. Before they used motors for this, it used to take three to five days to push them up the river with poles, and now with the motors they make the trip in fourteen hours. No wonder the merchants are enthusiastic about motors. I should think that there would be an ever increasing market here, and would like to see the American manufacturers get in on the ground floor."

THRILLS AT SOUTHERN REGATTA

A little extra excitement was injected into the outboard racing staged on June 2 at Pensacola, Florida, at Bay View Park by the Pensacola Outboard Club when a wharf on which spectators and judges were standing, suddenly collapsed and threw twenty-five people into the water. Fortunately no serious effects were experienced by any as a result of the unexpected ducking as there were several life-guards, other spectators and the occupants of a small boat nearby to render assistance to the twenty-five swimming about in the water.

The collapse of the dock occurred during the running of the first heat but contestants absorbed in their race kept right on going while the judges pulled themselves out of the water and resumed their job of timing the contestants.

Other thrills were provided for the spectators by a couple of spills that happened in the second and third heats. In the second, Brent Watson's boat hit a wave, turned a complete somersault and threw Watson twenty feet through the air while the boat landed right side up. In the third heat Ed Bailey's boat capsized at the lower end of the course but without injury to either boat or driver.

Among the group that was thrown into the water in the collapse of the wharf were the judges who ran the race; Commodore Ike Hightower, I, E. Knapp and A. R. McAllister, and also the starter, Captain Rox Cowley.

The final point score of the contest gave Ed Courson first place with 350 points, Bill Pourtless second with 300, Ed Bailey third, 225, and Brent Watson fourth, 100.

OUTBOARD STANDS ROUGH USE

The tilting feature of outboard motors is a factor of inestimable value in malarial control work, according to W. B. Reeves, who is engaged in this work for the South Georgia Power Company of Albany, Ga.

In a recent letter to the Johnson Motor Company notifying that organization that he is using one of its ten horsepower motors, Mr. Reeves said: "My work is in water over land that was not cleared before the power dam was built. Consequently the running is very bad and I do not see how the motor stands the hard work it gets every day. I slide over logs, run through shallow water, hit stumps under water, go forward and back with the feeling that when my days work is done that I will not have to paddle home."

"My equipment weighs about 300 pounds," he wrote, "besides two men, but with a sixteen foot boat the Sea Horse steps out like a thoroughbred."

LUBRICANT FOR RACING OUTBOARDS

Following the triumph of Duplex Outboards Special in the Albany-New York race in April, this same oil was equally prominent at the Worcester Outboard Regatta on Decoration Day.

Using Duplex Outboard Special Theodore Thompson of Somerville, Mass., in Class D, Division one, for amateurs, who, having not competed in fifteen races, established a new American record of 42.947 m.p.h.

In Class C, Division I, a trim young girl, Hilda J. Mueller, set a new American record of 38,528 m.p.h. Both of these two new American records were made with Duplex Outboard Special. These, of course, were time trials. In competition, Duplex Outboard Special proved equally effective, and again honors were divided between drivers of both sexes. Mrs. Mildred W. Hickey, with her celebrated racing hull Zev, led the field in Class B, Division two, and repeated her win in Class C, Division two. Arthur Sutherland, in Class A, Division three, also led the field driving a very pretty race. All three of these competitive winners used Duplex Outboard Special.

THE MONTH WITH THE OUTBOARDS

(*Continued from page* 180)

RULE CHANGES EMBRACE WORLD'S RECORDS

consider American records within several months' time after they have been established. Also, outboard motors of foreign make have a larger piston displacement than American motors and as ninety per cent of foreign as well as American records are made by American motors, the Commissioners decided to forego asking any more sanctions of the continental authorities.

All records made under the 1930 race rules will be declared world's records, as will the unbroken 1929 records. Of course, the admission of records depends upon the proper inspection of the motors used in sanctioned race events.

The recognition of world's records was but one of a number of important changes, which the commissioners adopted at their meeting. One of the principal changes was the creation of a new racing division, to be known as Division IV. This was done because of the pleas of a number of dissatisfied drivers who wished to race for cash prizes and records with stock motors. Hitherto such race events have not been recognized.

Drivers in any way connected with the trade will now be placed in Division IV where they may race non-stock motors with superchargers. Records made by these drivers will not be recognized and the division will be principally a manufacturers development class. Those drivers racing for cash prizes and records with stock motors will remain in Division III, but have been banned from racing against the amateurs in Divisions I and II, although they may race against the Division IV pilots. Provision will be made for events for the Division III drivers in the National Championships to be held in Middletown, Connecticut, on October 11, 12 and 13.

Another important ruling of the commissioners affects the granting of expense money to amateur drivers. Expense money, it was ruled, cannot be offered in lieu of prize money for amateurs unless paid to all contestants equally. Further, expense money must be paid by one classified as an amateur owner or driver and in no case must it exceed in amount the expense money allowances as provided by the Amateur Athletic Union.

Because of the habit of some race drivers in selling fast equipment to each other immediately before and after race events for nominal sums, the commissioners ruled that henceforth a race driver must own his boat and motor for at least five days previous to the race in which the equipment is to be used. This change, the commissioners believe, will do much to help clear up and improve racing.

Because of the great increase in interest in Intercollegiate outboard races, the commissioners ordered that the rules for races scheduled in college regattas shall be the current rules of the National Outboard Race Commission with the exception that no student shall be allowed more than four years of Intercollegiate outboard competition.

Further changes adopted by the commission are as follows: One who has raced in Division III or IV shall never be eligible to race against Division I or II drivers. (In this way the commissioners aim to protect the status of all outboard amateurs.) A Driver's Committee may act as an inspection committee in both sanctioned and unsanctioned races where records are not at stake. If records are at stake, a manufacturer's inspection committee must be called in. A new class of motor is to be recognized and added to the five in which records have previously been made. This new class is to be known as Class F and is for motors having 60 cubic inches of piston displacement. The weight of boats on which Class F motors may be used is to be not less than 190 pounds—the same minimum weight as required for Class D and E motors.

Members of the Commission which adopted the changes in the rules were: Charles F. Chapman of New York City, Chairman; A. T. Griffith of Peoria; A. L. Bobrick of Los Angeles, and George O. Hoehn of Chicago. These men spent considerable time in listening to the claims of members of the cash prize drivers group who have been threatening a break in the ranks of outboard pilots. Following the announcement of the changes to be made, representatives of the drivers placed their stamp of approval on the action taken by the commissioners. All factions of outboard race drivers are now appeased by the conciliatory policy adopted by the commissioners with the exception of those few dealers in motors, who have been engaged in selling their products and then racing against some of their customers. These men from now on will be placed in the newly created Division IV where records will not be recognized. As was anticipated, the commissioners did not make any change in the membership of the racing commission to include representatives of the race drivers. A committee of the drivers will, however, be asked to help formulate any rule changes which may be made next year.

10% to 50%
Increase in Power

from engines that have been rewired and equipped with RAJAH Terminals.

Laboratory tests and the experiences of thousands of engine owners have shown that the full power of the engine can be secured by installing new ignition cable and RAJAH Terminals.

Your two hands are the only tools you need.

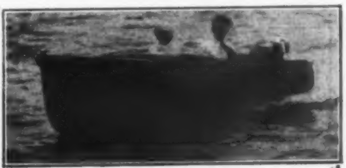
For best results, at little cost, specify RAJAH.

Order today from your dealer or send direct to us.

The RAJAH Company
Bloomfield, N. J.

RAJAH
THRUST
Rajah

LYMAN CLINKER-BUILT OUTBOARDS



BUILDERS of good boats since 1875 and with a policy of constant progressiveness, LYMAN boats have been advanced to the highest state of efficiency and performance. They have an undisputed reputation for extreme speed with safety, and having been developed on the rough waters of Lake Erie will prove dependable everywhere. The characteristic LYMAN Clinker-Built construction produces a water-tight boat at all times and is not equalled by any other method.

A complete line of sturdy speed tenders, practical utility boats and fine runabouts in sizes from 8 to 17 feet. Send for catalog.

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FOOT OF FIRST STREET **SANDUSKY, OHIO**

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E.Z. CONVEYOR

OTHER PATS. PENDING

Every owner of an outboard motor should own an E. Z. CONVEYOR. Does away with that strenuous work of carrying your motor. Makes a very fine working stand giving you lots of clearance to work on any part of your motor. Keeps your motor in upright position, not resting on any delicate parts, will not topple over. Pays for itself in the long run.

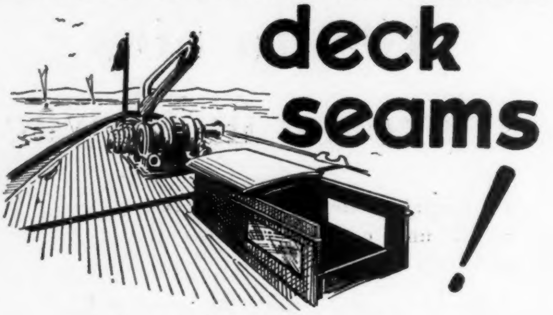
PRICE $20.00 F. O. B. BROOKLYN

These Conveyors are extremely rugged in construction, all metal parts enamelled to prevent rusting. Steel frame work with 12" rollr bearing disc wheels with 1-3/16" rubber tires. IMPROVED LATCH AND BEARINGS 1930 MODELS.

On Display at All Good Marine Dealers or Write
E. Z. Outboard Motor Conveyor, Inc.
1363-1367 East 29th St., Brooklyn, N. Y.

***Order today to insure early delivery.* Tel. Navarre 7216**

deck seams !



Use Jeffery's No. 1 Yacht Marine Glue

TENACIOUS — RESILIENT — DURABLE ABSOLUTELY WATERPROOF

Deck seams payed with Jeffery's No. 1 Yacht Marine Glue will look better and last longer. The first cost is a little more, but figured in years and satisfaction it is much cheaper than substitutes. It never dries out and brittles. Its resiliency is a matter of decades

There is a Jeffery's Glue for any leak

At all dealers everywhere.
Send for free booklet, "Marine Glue Uses."

L.W. Ferdinand & Co.
152 Kneeland Street. Boston, Mass

THE CARLISLE & FINCH CO.
CF

On the left is shown our 8½" incandescent searchlight, and on the right is the 7" incandescent searchlight, both with pilot house control. Our combination red and green running light is shown in the upper right corner. These illustrations show the latest type of modern construction.

Catalog I — incandescent. ***Catalog A — arc.***

THE CARLISLE & FINCH CO.
261 East Clifton Ave. **Cincinnati, Ohio**

THE MONTH WITH THE OUTBOARDS

EVINRUDING IN SOUTH SEAS

Almost weird in its ghastliness is this picture which has just been received by the Evinrude Division of the Outboard Motors Corporation, builders of Evinrude motors.

Strange indeed are the uses to which Evinrudes are sometimes put. In this case, the Evinrude shown powers a 12-foot boat used to show South Seas sightseers the famous Grotto of the Sea in the northern part of Kapa Island.

A dream cave is this indeed, with high vaulted roof and cavernous walls of magnificent colorings. The photograph was made by Wm. Albert Robinson, who is sailing around the world in the 32-foot ketch Svaap. It is through him that we learn of this Evinrude making itself a useful time saver to sightseers in the far off Tonga.

Sightseers in the South Seas explore the famous Grotto of the Sea on Kapa Island with the aid of an Evinrude

LUBRICATING THE SKANEATELES RACERS

It is interesting to note the fact that a large percentage of the winning outfits of the Intercollegiate Outboard Regatta at Skaneateles, N. Y., were lubricated with Pennzoil motor oil. James Duran, first in Class B-I; G. L. Keuhn, who placed third in B-I and C-I; W. Crawford who took two firsts in B-II and C-II as well as two seconds in D-II and F-II; Lyman Spire fourth in F-II, third in B-II, second in C-II and fifth in D-II; H. Welt, who was fourth in C-I, second in F-I and second in D I; Bill Moore, who placed fifth in C-I; A. W. Amsler, third in D-II; R. McCulloch, fourth in D-II and third in F-II; and P. Arlt, fourth in F-I—all of these drivers who succeeded in bringing their boats in among the first to finish, found that their Pennzoil lubrication permitted their motors to deliver their maximum r.p.m. and attributed a large part of their success to the satisfactory lubrication.

CENTURY NOTES

E. A. Doty of St. Petersburg, Florida, has been appointed sales manager of the Century Boat Company. He has been actively interested in the merchandising of Century boats in St. Petersburg for sometime, besides having acted as cashier of the American Bank and Trust Company of that city in recent years. Mr. Doty's efforts in the merchandising of boats will be of value not only to his company but to the industry as a whole.

M. Roy Brad, racing driver and builder of some considerable note in the Midwest, has been placed in charge of Century's newly established racing service bureau and will be at the important regattas of the country during the balance of this season to lend every assistance possible to the owners of Century's famous race boats. All communications regarding the racing abilities and classifications of the Midget, Cyclone and Hurricane should be addressed to his personal attention.

DODGE BUYS 3350 LYCOMING MOTORS

LYCOMING BUYS 3350 JOES GEARS

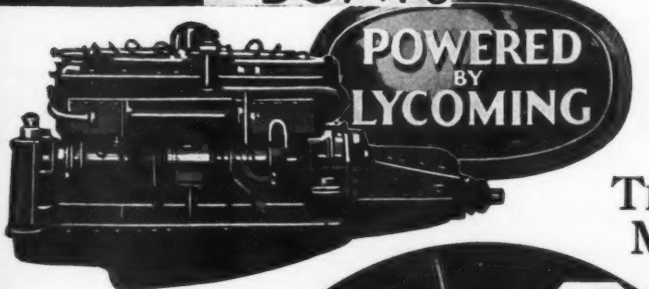
1930 FLEET OF
DODGE
BOATS

Largest Single Order Ever Placed for Marine Motors and Reverse Gears

When DODGE selected LYCOMING MARINE MOTORS for their 1930 Fleet, they placed the largest single order ever given to any engine builder . . . 3,350 LYCOMING MOTORS.

And when, in turn, LYCOMING selected JOES GEARS for these engines, they placed the largest single order ever given to any gear builder . . . 3,350 JOES GEARS.

Old Man Joe built, tested and shipped these gears at the rate of 100 per day and still maintained prompt shipments of regular orders to the 53 other engine builders who standardize on JOES GEARS.



Old Man Joe has equipt his factory to produce Reverse Gears for you in an economical manner and on a production basis.

The Snow & Petrelli
Manufacturing Co.

*19 Fox Street
New Haven,
Conn.*

***53
Engine Builders
Standardize
on***

Backed
by Old Man Joes'
25 Years of Experience

JOES FAMOUS REVERSE GEARS

REVERSE 80%~88%
of Motor Speed

Meteor

27 ft. All Mahogany Runabout
30 miles per hour - 8 cyl. - 115 H.P.
Carries ten persons comfortably
ALL SALT WATER CONSTRUCTION
Price f. o. b. Piqua $1850
Undeniably Greatest Value in the History of the Marine Industry

Direct sales eliminate 25 to 40% commission allowed agents or dealers

The Meteor compares most favorably with boats selling at $3,000

No other motor boat approaches the Meteor in its built-in value

Write Direct THE METEOR MOTOR CAR CO., Piqua, Ohio, U. S. A.

YARD AND SHOP

O'CONNOR AIRWAYS HOLD B. F. WOOD YARD

On page 166 of our May issue a story appeared to the effect that the B. F. Wood Shipyard, owned and operated at City Island by the Wood family since 1860, had been taken over by the Lyon-Tuttle Corporation of yacht builders by right of purchase.

The above statement has been found to be erroneous, as the B. F. Wood Shipyard at City Island is at present the property of O'Connor Transatlantic Airways, Inc., which acquired same in December, 1929, under a contract of sale which has been duly advertised, and it is being used at the present time as the construction plant of the O'Connor transoceanic giant flying boat which is expected to be in the air during the latter part of the current year.

The publishers of MoToR BoatinG are glad to correct the statement and impression made in our May issue and regret any inconvenience it may have caused the O'Connor Transatlantic Airways, Inc.

CONSOLIDATED ELECTS NEW OFFICERS

The recent death of the late John J. Amory has made it necessary for the Consolidated Shipbuilding Corporation of Morris Heights, N. Y., to make several changes in the officers of that organization. At a meeting of the Board of Trustees, the former vice-president, William L. Parslow, was elected president and Eugene H. Amory, son of the late John J. Amory, elected to the vice-presidency. Otherwise the capacities of the officers remain unchanged. The policy of the corporation will continue the same as in former years and the present officers look forward to a larger yacht building program than has formerly been considered.

HOMER WITH SPARKMAN-STEPHENS

Charles LeB. Homer of Southport, Conn., a member of the Pequot Yacht Club, has become associated with Sparkman & Stephens, Inc., naval architects and yacht brokers, of New York City.

WHAT YACHT CLUB MEMBERSHIP COSTS

(*Continued from page 78*)

Unqua Corinthian	5.00	30.00
Vallejo	25.00	12.00
Vermilion	5.00	8.00
Vineyard Haven	10.00	30.00
Wadawanuck	25.00	25.00
Waquoit Bay	25.00	10.00
Warwick Country Club	200.00	100.00
Washington Park	....	10.00
Watch Hill	10.00	20.00
Waternook		5 and 10
Waucoma	....	9.00
Waukegan	10.00	25.00
Wauwinet	....	2.00
Weetamoe	1.00	5.00
Westchester	1,500.00	300.00
West Hampton	20.00	20.00
Westport	100.00	100.00
Westville	10.00	6.00
Wethersfield Cove	10.00	10.00
White Bear	100.00	75.00
White Star	5.00	6.00
Wianno	....	50.00
Williamsburg	....	10.00
Windward	....	30.00
Winthrop	....	20.00
Winthrop Highlands	....	10.00
Wissinoming	5.00	6.00
Wollaston	5.00	15.00
Woods Hole	5.00	5.00
Yachtsmen's Club	50.00	25.00
Yale Corinthian	5.00	3.00
Ydrad Power Boat	5.00	12.00
Yonkers	15.00	12.00
Yonkers Corinthian	10.00	18.00
Yorktown	5.00	25.00

Note: The above figures are subject to change. They represent the latest available figures on file in our office. We will be glad to furnish on application the name and address of the Secretary of any Club.

Advertising index will be found on 3rd last page

for Your Safety LEE Suction Exhaustor

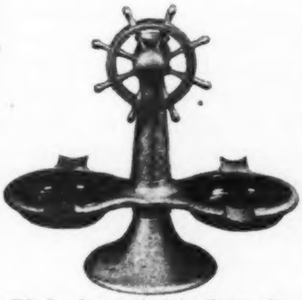
Furnished in 6, 12, 32 and 110 volts.

YOU can reduce to a minimum the hazard of fire or explosion lurking in accumulated gasoline vapors in the bilge or engine compartment by installing the LEE Suction Exhaustor.

Suction Exhaustors for engine compartments are strongly recommended by the National Association of Engine & Boat Manufacturers and by the Board of Fire Underwriters. The Lee Suction Exhaustor not only quickly removes accumulated inflammable vapors before starting the engine, but insures constant forced ventilation while under way.

Why gamble with fate—put a Lee Suction Exhaustor in your boat now. Send today for further particulars.

A Unique and Practical Nautical Smoking Accessory



THIS beautiful smoking accessory is more than a novelty or mere receptacle for ashes. It is a practical and durable article combining a sharp, clean cutting cigar clipper and two removable three-inch royal blue ash receivers and four rests for cigars or cigarettes.

Distinctly nautical in design, it makes a handsome ornament as well as necessary essential on your boat, in your home or at your club. An ideal gift for both yachtsmen and landlubbers. Made of cast brass, carefully machined and highly polished, it will last a lifetime.

Price $10.00

Sent postpaid anywhere in the United States

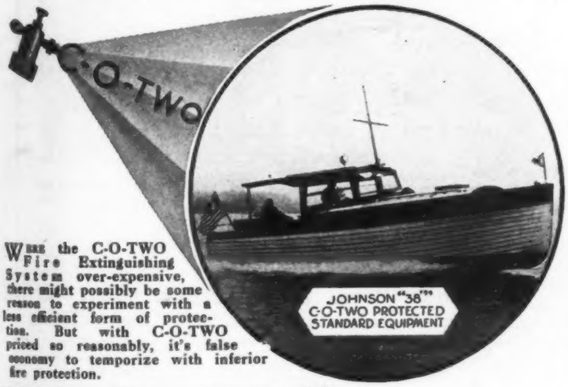
Order yours today

Dealers: Write today for an attractive proposition.

S. CLYDE KYLE

GENERAL MOTORS BUILDING, 1775 BROADWAY, NEW YORK, N. Y.

A Boon to the Boatsman's Purse, Pleasure and Protection . . .



WERE the C-O-TWO Fire Extinguishing System over-expensive, there might possibly be some reason to experiment with a less efficient form of protection. But with C-O-TWO priced so reasonably, it's false economy to temporize with inferior fire protection.

PLEASURE — Those disturbing fears of fire never mar the mariner's sailing pleasure whose boat is insured with C-O-TWO against the havoc of fire. And no matter whether yours is a runabout or a yacht there's a C-O-TWO system to absolutely fit your needs.

PROTECTION — "The C-O-TWO Automatic System" (with separate remote manual control) is the first automatic fire extinguishing system to employ the use of harmless C-O-TWO Gas. Since its beginning, it has maintained a leadership fitting to its superior performance and perfect protection.

A booklet and price list will be sent on request from the factory or nearest representative.

C-O-TWO FIRE EQUIPMENT CO.

3700 Mines Ave., Los Angeles, Calif.

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NEW YORK, N. Y. [illegible]	BOSTON, MASS. WALTER E. MORETON CORP. 1040-1 Commonwealth Ave.	CHICAGO, ILL. MILTON G. HERBERT Motor Boat Mart, Navy Pier	DETROIT, MICH. C. T. CHENEVERT [illegible]	NEW ORLEANS, LA. ARTHUR DUVIC'S SONS 122 Chartres St.
SEATTLE, WASHINGTON [illegible]	SAN FRANCISCO, CALIF. ETS-HOKIN and GALVAN [illegible] Stewart St.	WILMINGTON, CALIF. ETS-HOKIN and GALVAN [illegible] Avalon Blvd.	SAN DIEGO, CALIF. [illegible] 2nd & C. Sts.	VANCOUVER, B. C. BOEING AIRCRAFT, LTD. [illegible] Georgia St. West

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SAVAGE UNIVERSAL BRACKET

For an auxiliary power unit, ready in any emergency, or for trolling at a smooth, economical speed. Recommended by all outboard motor manufacturers. Adaptable to all kinds of boats. Price $20.

HARLEY *SPEED* MUFFLER

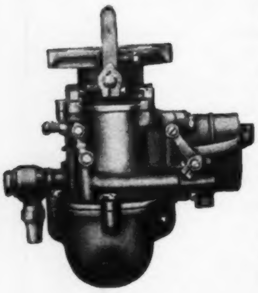
Eliminates noise without creating any back pressure or reducing the r. p. m.'s. For all motors from 5 to 500 h.p. Inexpensive and easy to install. Made entirely of non-corrosive metal, will not rust out.

Agencies for the Savage Universal Bracket and the Harley Speed Muffler are now available. If you are a dealer, write today for further information. We are sole distributors.

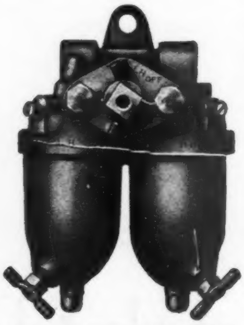
SAVAGE
BOAT COMPANY, LTD.
585 BOYLSTON ST., BOSTON, MASS.

ZENITH MARINE CARBURETORS AND FILTERS

Zenith's time-tested principle of carburetion, applied to marine requirements, has demonstrated its value in the Zenith Marine Carburetor. Positive, dependable action; no moving parts to affect the mixture; rugged, rust-proof construction. Rough seas or quick turns have no effect on engine performance. You can't afford to economize with Safety. That's why so many power boat owners have equipped with Zenith MARINE carburetion, and why it has grown steadily in favor. It sets a NEW standard in marine carburetor performance! Get the most Safety and Satisfaction from your power boat this year—equip with Zenith MARINE carburetion!



Zenith *high-efficiency* filters are built in various models for every make and size of gasoline and Diesel engine. They remove ALL impurities at sustained high speeds and in the hardest service. Efficient in action, easy to install and clean, Zenith filters are sturdy and durable, with *no fragile parts.* Duplex Zenith models provide maximum safety if you frequent rough, off-shore water, strong current or tides. They protect your fuel pumps or injector nozzles. Prevent shutdown due to dirt and water—install Zenith *high - efficiency* filters.



Send for catalog and dealer's name.

ZENITH-DETROIT CORPORATION

DETROIT **MICHIGAN**

Branches:
NEW YORK CLEVELAND CHICAGO MILWAUKEE TORONTO

Modernize Your Boat with a MORSE REDUCTION GEAR

A Morse Straight Line Reduction Gear will give your boat more speed and maneuverability, together with lowered maintenance and operating costs. Power at the propeller is increased and vibration is materially lessened. These gears are the ideal equipment for modern type power plants.

Morse Straight Line Reduction Gears are available for both Diesel and slow speed gas engines, as well as the higher speed motors. Installation drawings, and complete information will be mailed free upon request. Please state size and type of power plant when writing.

Morse Chain Co.
7601 Central Ave.
Detroit, Michigan

Photograph showing relative size of two new heavy-duty Morse Reduction Gears.

MORSE
REDUCTION GEARS

ALGONAC BOAT HOISTS

If you have a nice boat, why not keep it nice with one of these Hoists? You will be more than pleased with this easily operated and substantial hoist.

$140.00 to $300.00
Fully Guaranteed

Monnier Bros., Inc., Algonac, Mich.

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15 HP TO 240 HP
POWERED BY Buffalo
$480.00 TO $2800.00

A Symbol of Dependable PERFORMANCE

Buffalo Marine Engines

Hundreds of owners are proclaiming their dependability, economy and service.

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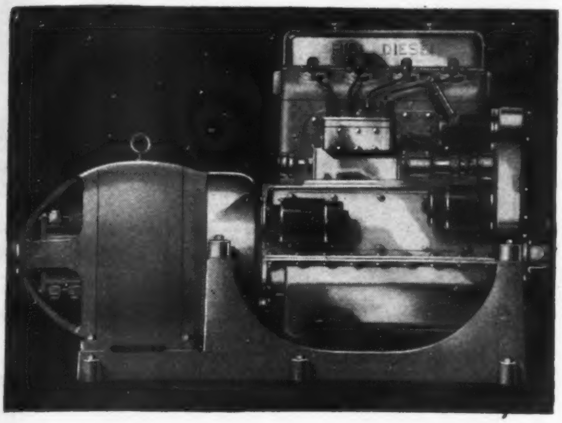
BUFFALO GASOLENE MOTOR CO.
1286 Niagara Street **Buffalo, N. Y.**



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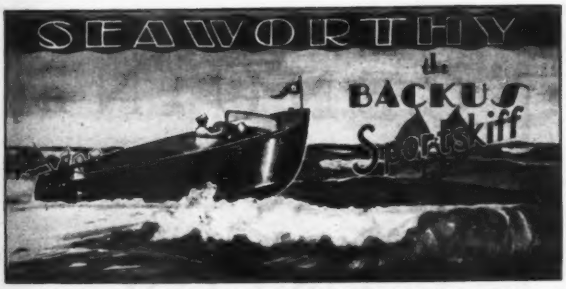
★ The little aristocrat of Diesels has arrived to complete the program of safety and economy for yachts and other craft.

• • • Uses main engine fuels with remarkably smooth, quiet operation, and without smoke or odor • • The design conforms to the most advanced automotive practices, employing the finest materials of the metallurgists' art • • The weight and dimensions compare with gasoline sets of equal capacities • Is regularly equipped with electric starter and generator, but can be started by hand cranking • • Furnished in ten, fifteen and twenty kilowatt sizes • • • Technical data will be sent upon request.

HILL-DIESEL ENGINE CO. 248 MILL ST., LANSING, MICH., U.S.A.

Internal Combustion Engines since 1899 — — Diesels Exclusively since 1926



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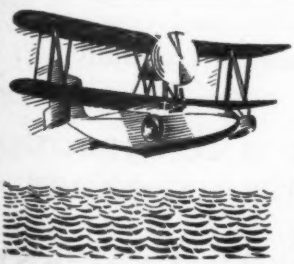
Send today for illustrated folder or see the Sportskiff on display at showroom of Henry A. Pohl, Inc., 410 N. E. 13th Street, Miami, Florida. For demonstration see Mr. Alfred Denig, Huntington, New York,

G. T. BACKUS & SON FORT PIERCE, FLORIDA



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Sales Division 27 West 57th Street, New York

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Fig. 831
Poweray Searchlight
NATIONAL
with outside accessible rebulbing feature
NATIONAL
Fig. 832
Fig. 770-C
Fig. 514-C

We manufacture a complete line of Poweray and Lebby Searchlights, running lights and cabin fixtures, outboard specialties and marine type electric house fixtures. Ask for National Marine Products at your dealer. Look for the trade mark. Write for circular on marine fittings to Dept. G.

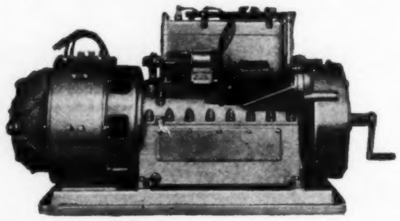
The NATIONAL MARINE LAMP COMPANY
FORESTVILLE, CONN., U.S.A.

The Most Complete Line

Universal Motor Co.

Electric Plants

Has Ever Built



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D. C., 1½, 2, 3, 4, 5 KW sizes, 32, 110 and 220 volt service.
A. C., 2 and 5 KVA sizes, 60 cycle, single or three phase, 110 or 220 volt service.

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D. C., 7½ and 10 KW sizes, 110 or 220 volt service.
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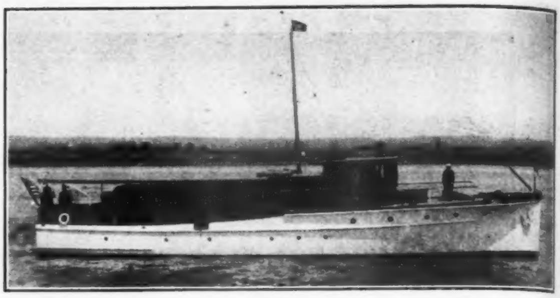
D. C., 10, 15, and 20 KW sizes, 110 and 220 volt service.
A. C., 15, 20, and 25 KVA sizes, 60 cycle, three phase, 110, 220, or 440 volt service.

Also, special plants powered with Universal Straight Eight, 115 H. P. motors, up to 35 KW size.

UNIVERSAL MOTOR COMPANY
210 Harrison Street, Oshkosh, Wis.



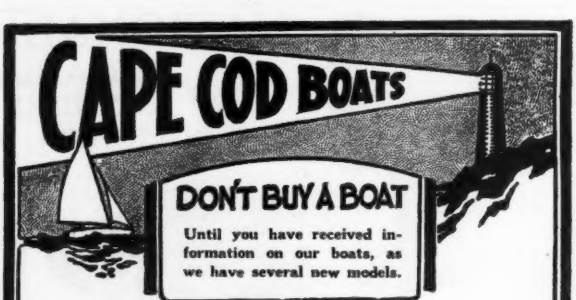
THIS 75′ x 17′6″ x 4′9″ Cruiser, delivered this month, is a fine illustration of the fact that a sturdy and rugged craft can be designed and built without detracting in any way from the grace and beauty desired by the most exacting yachtsman. For further particulars communicate with—

MARINE CONSTRUCTION COMPANY
WILMINGTON, DELAWARE

Naval Architects and Custom Yacht Builders

4 Marine Railways
Machine Shop
Storage Yard
Facilities up to 80′

"Any Boat—Anything for a Boat"



CAPE COD BOATS

DON'T BUY A BOAT

Until you have received information on our boats, as we have several new models.

CAPE COD
BABY KNOCKABOUT

This model is brought out to meet the demands of various yacht clubs and individuals, a number of yacht clubs having adopted this boat as a standard racing class. Some clubs have fleet of 30 boats. All Cape Cod boats are standardized built.

ROWBOATS

10, 12, 14 feet long. Of various models. Strong, well-built and safe.

RUNABOUT, LAUNCHES AND DORIES

New 16′ Runabout with Van Blerck Jr., 20′ Runabout, Niagara motor, 20′ Special Dories safest sea-going boat built.

OUTBOARD MOTORBOATS

New sea-going boat for outboard motor; other models for general utility and high speed use.

16′ Speedcem with Van Blerck Jr., self-starter and reverse gear. Complete ready to run. Most seaworthy and fastest little boat built. SPEED 30 Miles. Order early as our production is limited. $987 F.O.B. Factory

CAPE COD SHIP BUILDING CORPORATION
Builders of Standardized Boats
SHOW ROOM, MAIN OFFICE, AND WORKS, WAREHAM, MASS.
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GENUINE MAHOGANY

Costs Less

In the long run
Because there is

Less sales resistance
When you can truthfully
say:—

"THIS BOAT IS CONSTRUCTED
OF GENUINE MAHOGANY"

THE MENGEL COMPANY
INCORPORATED
LOUISVILLE, KENTUCKY

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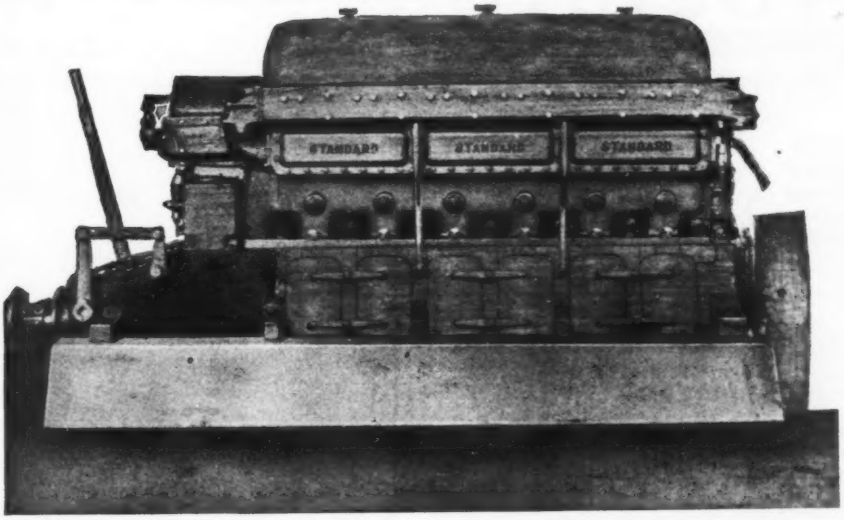
"STANDARD'S" SMOOTH SIX



100 H. P. at 750 R. P. M.
Solid Injection Full Diesel
Simple . . . Clean . . . Compact

Priced Surprisingly Low. Write
Standard Motor Con. Co.
178 Whiton St. Jersey City, N. J.

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FOR SALE:

Beautiful all mahogany
Chris-Craft 28 Foot Runabout

Has been used only 30 hours. Completely equipped. Lux Safety Fire System. Speed 42 miles per hour. Cost new, $5,800.

Will Sell for $3,800

May be inspected at Consolidated Ship Building Corp., Morris Heights, New York City. Telephone, Sedgwick 7800. Ask for Mr. Bolen.

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STURGES ANCHOR HOIST

Easily installed by anyone without disfiguring or marring your cruiser in any way.

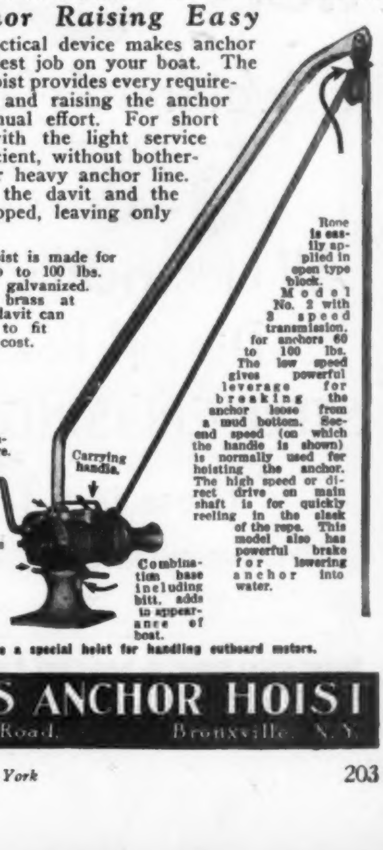
Makes Anchor Raising Easy

THIS simple practical device makes anchor raising the easiest job on your boat. The Sturges Anchor Hoist provides every requirement for lowering and raising the anchor with minimum manual effort. For short stops, anchoring with the light service line is usually sufficient, without bothering to get out your heavy anchor line. When not in use, the davit and the hoist can be unshipped, leaving only the base on deck.

The Sturges Anchor Hoist is made for any type of anchor up to 100 lbs. Sturdily built, heavily galvanized. Furnished entirely in brass at slight extra cost. The davit can be designed especially to fit your boat without extra cost.

Made in three different sizes.

You will be surprised at the many features of the Sturges Anchor Hoist. Let us explain them to you. Write today for details and prices.


Davit unships here.
Carrying handle.
Windlass unships here.
Combination base including bitt, adds to appearance of boat.
Patent Applied For

Rope is easily applied in open type block. Model No. 2 with 3 speed transmission, for anchors 60 to 100 lbs. The low speed gives powerful leverage for breaking the anchor loose from a mud bottom. Second speed (on which the handle is shown) is normally used for hoisting the anchor. The high speed or direct drive on main shaft is for quickly reeling in the slack of the rope. This model also has powerful brake for lowering anchor into water.

We also manufacture a special hoist for handling outboard motors.

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3 Kensington Road, Bronxville, N. Y.

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Write for Booklet, "Davy Jones Locker," About Paints and How to Use Them.

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159 Varick Street **New York, N. Y.**
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GOODRICH CUTLESS BEARINGS

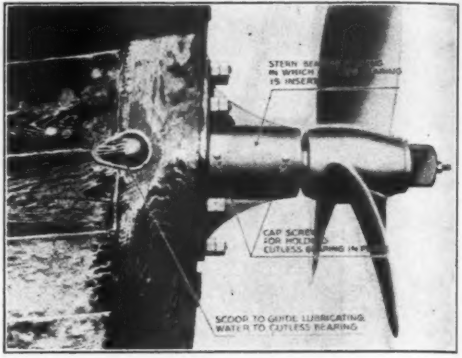

Photo shows Goodrich Cutless Bearing installed in the "Elvira Casper," a New England fishing boat

The Goodrich Rubber STERN BEARING outlasts every other type—*and is easy to install . . .*

WHY are Goodrich Cutless Rubber Bearings coming into almost universal use on all types of commercial and pleasure craft—for both stern bearings and struts? ¶ It is because they do what other bearings cannot do. They are made of rubber and lubricated by water—doing away entirely with oil seals and other complicated and impractical designs. Because they are made of rubber, they are not cut or scored by the sand and grit that quickly ruin other types of bearings. They reduce vibration, shaft scoring and shaft wear. The bearings themselves outwear all other types, often by as much as ten to one! ¶ Goodrich Rubber Bearings are easily—and inexpensively—installed.

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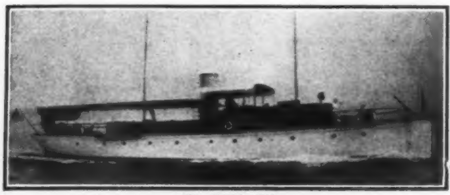
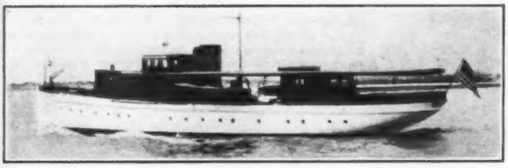
FOR SALE

All of the yachts shown on this page are for sale. Some of them may be chartered. Select those which appeal to you most and we shall be glad to send complete information and prices. You are safe when buying through Gielow.

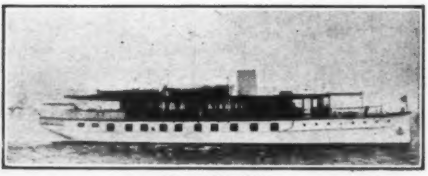


No. 7034—91'
TWIN SCREW DIESEL YACHT

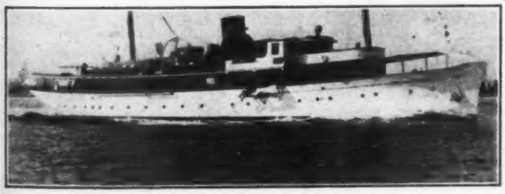
No. 9768—160'
TWIN SCREW DIESEL YACHT



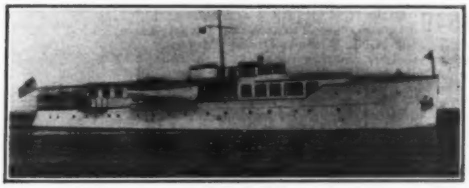
No. 10507—98'
TWIN SCREW DIESEL YACHT



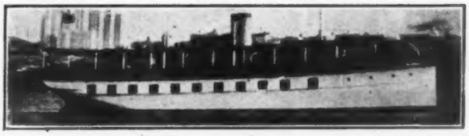
No. 9800—104'
TWIN SCREW DIESEL YACHT



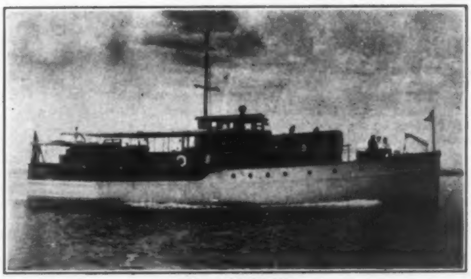
No. 10166—161'
TWIN SCREW DIESEL YACHT



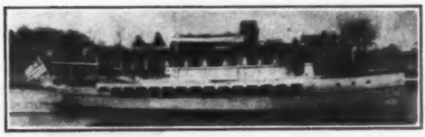
No. 10905—122'
TWIN SCREW CRUISER



No. 9962—88'
TWIN SCREW HOUSEBOAT



No. 11253—75'
TWIN SCREW MOTOR YACHT



No. 9472—80'
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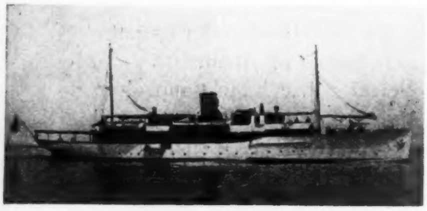
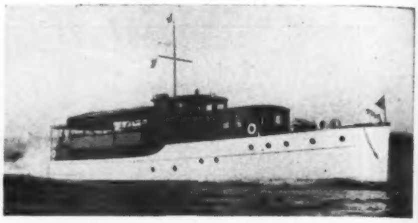
The YACHTS

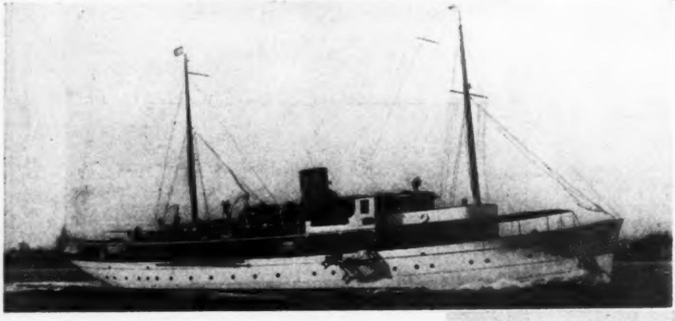
illustrated on this page represent only a few of the large number listed with us FOR SALE or CHARTER. Let us know your requirements.



No. 4649 FOR CHARTER — Modern 172-ft. Ocean-going Twin Screw Diesel Yacht. Two 6-cyl., 350 H.P. Winton Diesel Motors. Accommodations include continuous deckhouse containing large dining saloon, library and living room. Below six staterooms, four baths. Large deck space with shelter deck aft. Practically only Diesel Yacht this size available for summer use. Price reasonable.

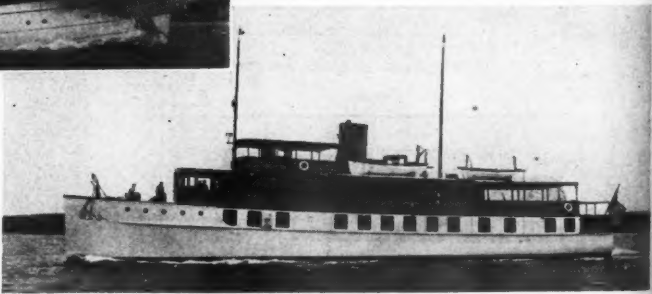


No. 5590 FOR SALE — Modern Twin Screw 75-ft. Cruising Power Yacht of recent build. Cruising speed up to 14 m.p.h. Two 6-cyl. 135 H.P. Gasoline Motors. Roomy cruising accommodations include four double staterooms, bath and three toilet rooms. Dining Saloon in forward deck house. Completely equipped with all modern conveniences, including hot water heat, Lux fire system, etc. Price very attractive for immediate sale.



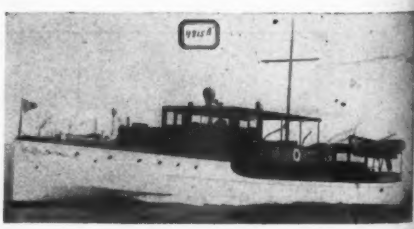
No. 5023 (above) FOR SALE BY ESTATE —Modern steel 160-ft., Twin Screw Diesel Yacht designed by us and built under our supervision. Speed up to 14 knots. Two 6-cyl. 450 H.P. Winton Diesel Motors. Accommodations include six staterooms; deckhouse contains dining room, writing room and living room. All modern conveniences. Large deck space. Price most attractive.

No. 4877 (below) FOR SALE—Steel, twin screw 112-ft. Cruising Houseboat. Two 6-cyl. 125 H.P. Winton Motors. Large deckhouse containing owner's stateroom and bath, combined living and dining room. Below are six staterooms and four baths. Heavily constructed in best manner. Beautifully finished and furnished. Price attractive. Write for further particulars.



No. 5434 (below)

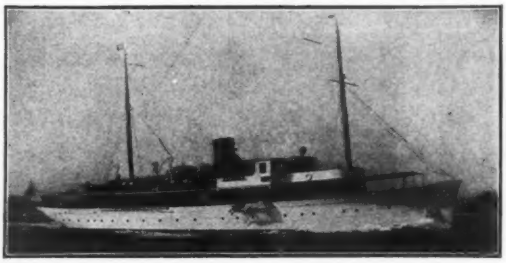
FOR SALE—Roomy, fast Cruising Power Yacht. 94 feet long, 15 foot beam. Built 1928. Two 350 H. P. Winton Motors. Cruising speed 17 m.p.h. Large combined dining-room and living-room in sunken deckhouse forward. Below aft are two double, two single staterooms, three baths, toilet rooms. Large deck space. Attractively finished and furnished. All modern conveniences. Hull double planked. Built from our plans and under our supervision. Price attractive for immediate sale.



No. 5520 (above) FOR SALE — Twin screw 66-ft. Consolidated Commuter. Speed up to 22 miles. Two 6-cyl. 170 H.P. Speedway Motors. New 1929. Double stateroom; dining saloon in deckhouse. Forward and after cockpits. Splendid condition. Unusually attractive price.

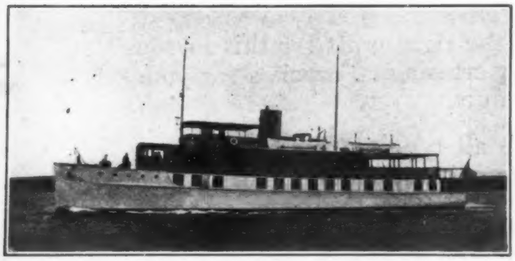
No. 4815 (above) FOR SALE — Fast 80-ft. Twin Screw Power Yacht. Two 6-cyl 225 H.P. Motors. Speed 16 miles. Three double staterooms, shower bath and two toilet rooms. Dining saloon in deckhouse forward. Large deck space. Price reasonable for a quick sale. Further particulars on request.

1093—For Sale—Famous three masted auxiliary schooner. 204'6" overall—167' on the waterline, 32' beam, Draft 14'16". Unusually well constructed, built in 1923, equipped with a 600 H.P. Burmeister Diesel. Speed 11-12 knots under power. 5 double and 2 single staterooms.



9281—For Sale—160' off shore steel Diesel yacht, built in 1926, powered with 2-450 H.P. Diesel engines. Speed 14 knots, cruising radius 6500 miles. 4 double, 2 single staterooms and 5 baths. Fully equipped and in perfect condition.

No. 4595 — For Sale — 52' Auxiliary Schooner. One double stateroom, two transoms in saloon. Powered with Scripps motor.



1786—For Sale or Charter—111'6" Steel Yacht. Completely equipped and furnished throughout. Has 27 K.W. Generator and 60 ampere Edison batteries. All auxiliary pumps in duplicate; all deck houses and trim of Teak. Powered with two Winton motors 125 H.P. each.

8227—For Sale—Attractive twin screw power boat—77' overall—15'4" beam—4' draft. Powered with 2-150 H.P. Winton motors. Speed 15 miles. 3 staterooms and bath. Boat in commission, inspectable in New York.

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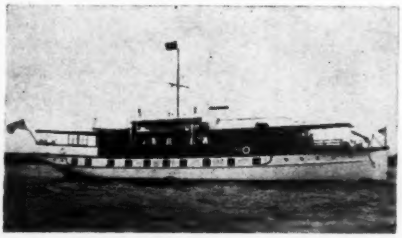
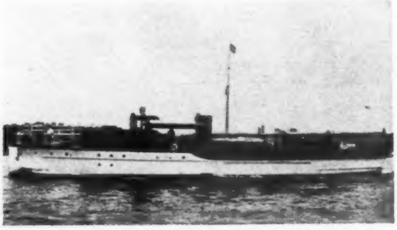
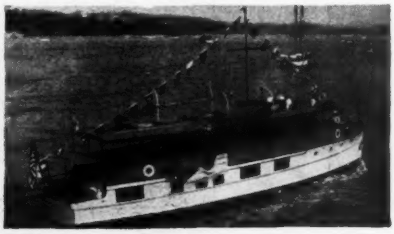


NO. 1275—For charter only, new 1929 Mathis houseboat, only Diesel houseboat available. Powered with Winton engines giving speed of 14 miles. Boat in perfect condition and beautifully furnished.



NO. 365—For Sale: 93' power yacht, Winton gas engines, speed of 12 miles. Boat well-known in Southern and Northern waters. Quarters include two double rooms, one single room, one bath, two toilets, dining saloon in deckhouse. Can be purchased at a low figure.



NO. 627—For Sale: A John H. Wells designed cruising houseboat, 78' long, two Winton gas engines, giving a speed of 14 miles. Quarters include two double, two single rooms, two baths, dining-room and pilot house in deckhouse. Boat in beautiful condition and fully equipped.

NO. 1332—For Sale: 38' Hydroplane speedboat powered with two Gar Wood Liberty motors 450 H.P. each, speed of 50 miles per hour. Probably the finest boat of her type on the market at the present time. Has had little use. Can be purchased at half original cost.

The selection of the right craft for this season . . . or for winter cruising . . . makes for your pleasure and comfort.

Our lists include all types of craft for every water. There are only a limited number of the better ones of each type available. Consequently, we suggest that you let us know the kind of yacht you may want as soon as possible so that we may make recommendations. This is, of course, entirely without obligation to you.

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A FEW SUITABLE YACHTS ARE STILL AVAILABLE FOR CHARTER

If you are taking a party to the Races, or if you are planning a late Summer cruise, you will be pleased to learn that a number of suitable craft are still available for charter. A few representative yachts are illustrated here. In writing for information, please state your requirements.

Steam . . . Diesel . . . Gasoline . . . Sail

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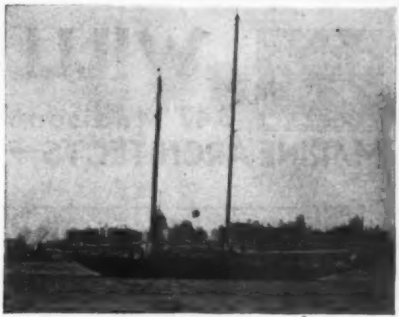
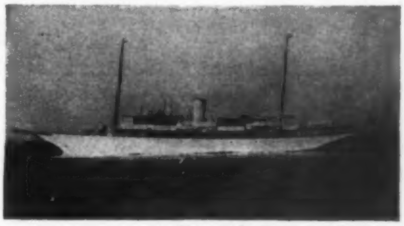
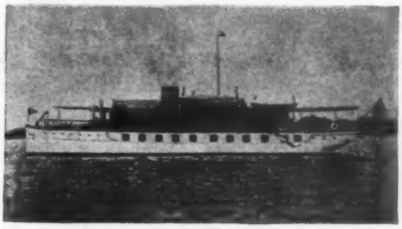


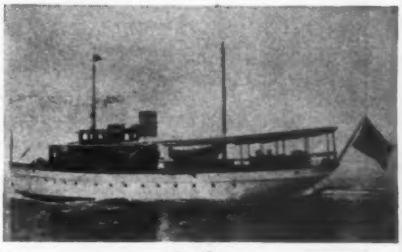
No. 430 • 127' *Auxiliary Schooner*



No. 882 • 185' *T. S. Diesel Yacht*



No. 993 • 103' *Houseboat*



No. 5032 • 85' *Cruiser*

No. 6004 • 99' *Auxiliary Schooner*

WILLIAM M ELDRIDGE, Inc.

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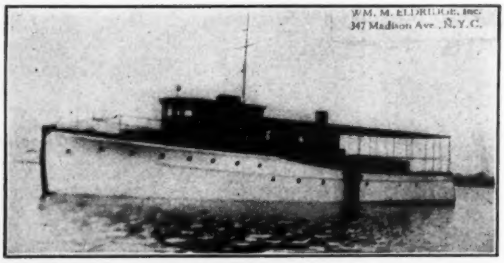
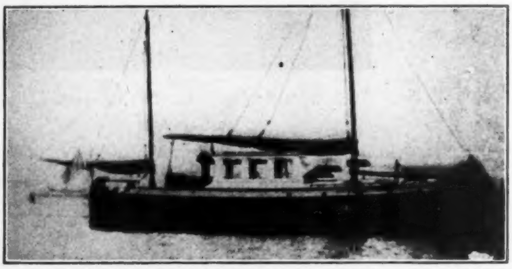
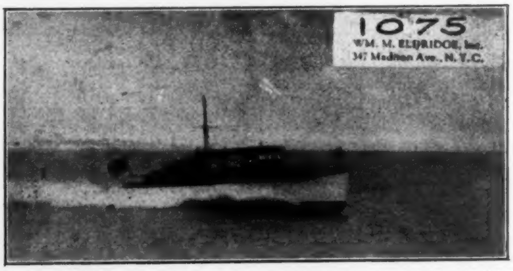


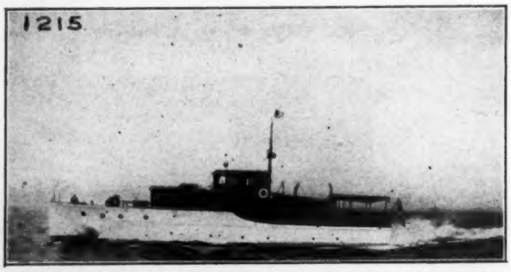
No. 2524—T. S. Diesel Yacht, completed Oct. 1929. Designed expressly for off shore cruising. Two staterooms, bath and extra toilet, sun deck and dual control installed since photo was taken. Speed 15 miles. Inquire WILLIAM M. ELDRIDGE, Inc., 347 Madison Avenue, New York, N. Y.



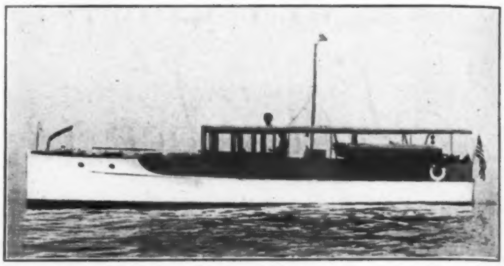
No. 1144—Auxiliary designed by Hand, 50' x 13'6" x 5'6". Sterling Motor. Is designed for off shore cruising. Single stateroom and cabin sleeping four. A better than new yacht. Inquire WILLIAM M. ELDRIDGE, Inc., 347 Madison Avenue, New York, N. Y.



No. 1075—Commuter 47' long with speed of 32 miles. Pair Capitol Liberty Motors in A-1 condition. Electric refrigerator, electric windlass, lighting plant. Cannot be duplicated for less than double the asking price. Inquire WILLIAM M. ELDRIDGE, Inc., 347 Madison Avenue, New York, N. Y.

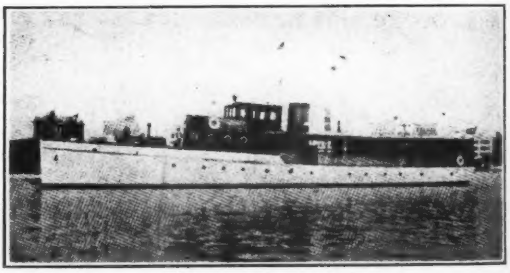


No. 1194—Probably one of the finest and most beautifully appointed yachts of her size. Twin screw 55' long. Decorated by Tiffany Art Studios. Used about 2 months. Three staterooms, bath and 2 toilets. Inquire WILLIAM M. ELDRIDGE, Inc., 347 Madison Avenue, New York, N. Y.

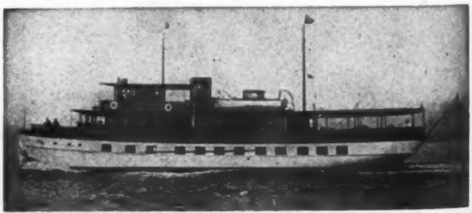


No. 1269—An ideal cruiser. Two Maybach motors. Beautifully equipped. Sleeps seven. Double planked mahogany teak decks. Owner has always taken special pride in keeping his yacht in finest condition. Inquire WILLIAM M. ELDRIDGE, Inc., 347 Madison Avenue, New York, N. Y.

No. 1083—For immediate sale—45 ft. express cruiser, two 200 H.P. Hall-Scott motors, perfect condition Inquire WILLIAM M. ELDRIDGE, Inc., 347 Madison Avenue, New York, N. Y.



No. 2522—T. S. Winton Diesel yacht 100' long. Three staterooms, two baths. Entirely refurnished 1929. Grand piano, radio transmission set, duplicate lighting plants. Inquire, etc.



No. 2016—Available for Sale or Charter—100' T. S. Winton powered cruising houseboat. Is beautifully furnished and in exceptionally fine condition. Five staterooms, three baths. Inquire WILLIAM M. ELDRIDGE, Inc., 347 Madison Avenue, New York, N. Y.

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The following July bargains have been selected from our large stock of new and used runabouts and are offered at very special prices for immediate delivery during this month. Don't fail to see these boats and ride in them before you buy any boat.

Remember, our price is for the boat in the water, ready to run. No delays or delivery charges, and our complete plant is right here at your service to insure your future satisfaction. You can't go wrong when you buy your boat from an organization with such facilities as we offer you.

No. 175—16′ Laconia Sportster. Complete, in original crate	$ 200
No. 220—Biscayne Baby—125 H.P. Scripps Motor	800
No. 192—29′ Hacker Special, 110 H.P., Chrysler Motor	1350
No. 214—26′ Dodge, 110 H.P. 8 cyl. Lycoming Motor	1400
No. 222—22′ Chris-Craft, 110 H.P. Chrysler Motor	1500
No. 199—24′ Sea-Lyon "35", 110 H.P., Chrysler Motor	2200
No. 210—26′ Hacker Sedan, 200 H.P. Scripps Motor	2300
No. 223—29′ Hacker Dolphin, 200 H.P. Sterling Petrel Motor	2300

We also have a number of other fine used runabouts we have taken in trade which are offered at less than the usual trade-in value rather than to carry them through the season. You save the difference and get your boat right at the beginning of the season if you buy one of these now. This includes Sea-Lyons from 24 to 36 feet, priced at $2200 to $6000, also Baby Gars, Hacker Dolphins, Chris-Crafts and others at prices ranging from $600 to $6000.

Every used boat we sell has been put through our plant and thoroughly reconditioned so we can guarantee them as to both hull and power plant. Come up to our plant and let us give you a ride in any boat you select.

Come up and inspect these boats yourself.

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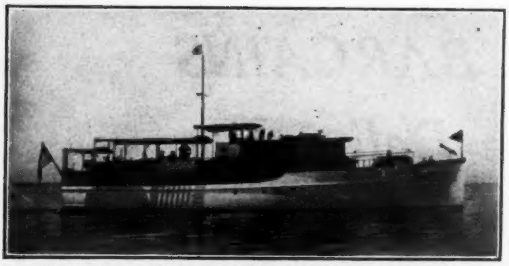
SPARKMAN & STEPHENS

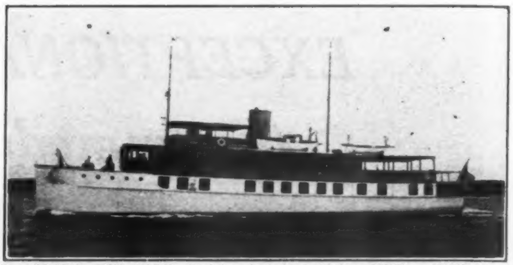
INCORPORATED

Yachts of All Types for Sale and Charter

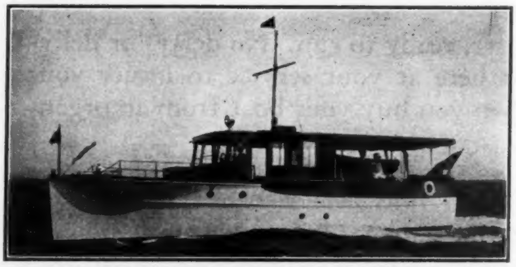
11
EAST 44TH STREET
NEW YORK



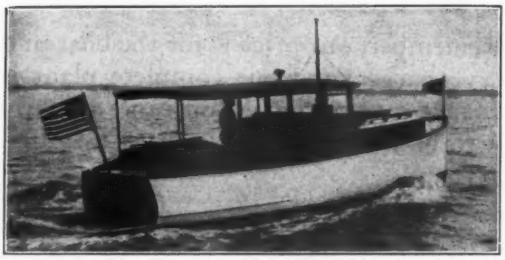
No. M-3342—FOR SALE OR CHARTER—Twin-screw gasoline yacht, 72' x 14'6" x 4'4", built by Lawley from Wells' designs. Sleeping accommodations for seven, one bath, three toilets, Winton motors. SPARKMAN & STEPHENS, Inc., 11 East 44th Street, New York.



No. M-2047—FOR SALE—Cruising houseboat 111' x 22'3" x 3'10", designed and built by Lawlev. Four staterooms, three baths, dining and lounging rooms. For further data, price and location, consult SPARKMAN & STEPHENS, Inc., 11 East 44th Street, New York.



No. M-4384—FOR SALE—Elco 42', specially built in 1929, powered with two motors. Sleeps four in owner's quarters, two toilets, etc. For further data, price and location consult SPARKMAN & STEPHENS, Inc., 11 East 44th Street, New York.



No. M-4685—FOR SALE—A. C. F. 30' double cabin cruiser, built 1929. Sleeping accommodations for six, toilet, galley, etc.; 72 h.p. motor. For further data, consult SPARKMAN & STEPHENS, Inc., 11 East 44th Street, New York.

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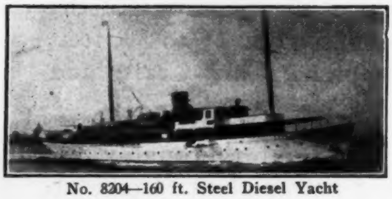
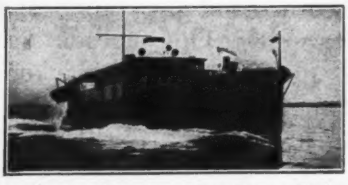
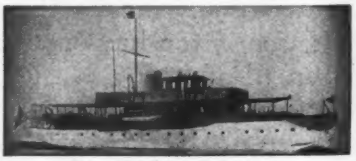


No. 8204—160 ft. Steel Diesel Yacht

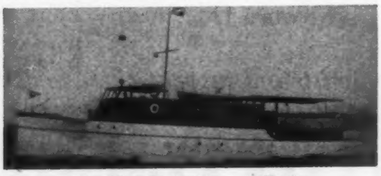


No. 4457—105 ft. High Speed Express Cruiser

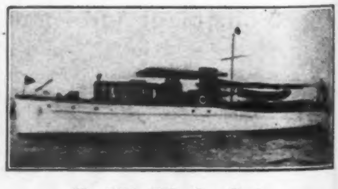


No. 8801—90 ft. Gas Yacht

No. 5757—70 ft. Diesel Cruiser



No. 8699—81 ft. Express Yacht



No. 2566—67 ft. Gas Cruiser

No. 7817—100 ft. Power House Yacht

No. 8794—45 ft. Commuter

No. 5308—45 ft. Twin Screw Cruiser

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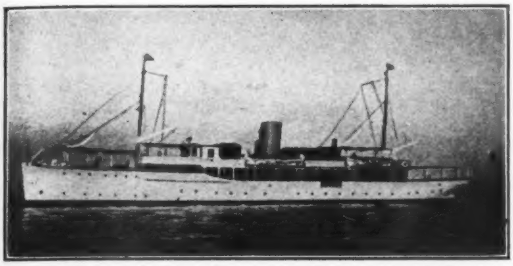
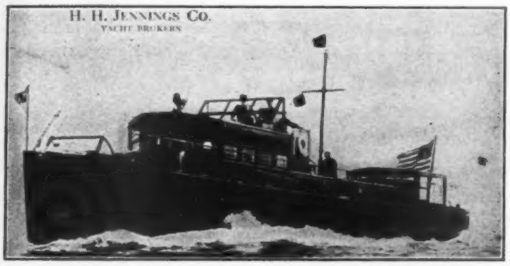
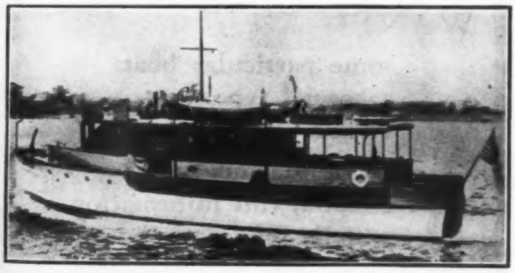


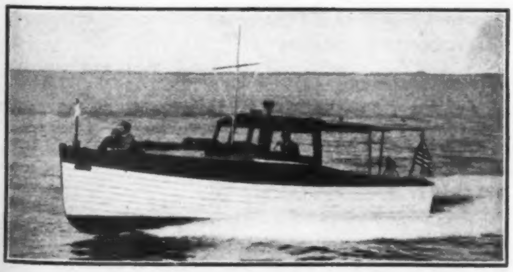
No. 2755—Sale or charter. 172-ft. ocean going twin screw diesel yacht. Four double and two single staterooms, four baths. Large deckhouse containing dining saloon, library, living room, etc. Two 350 H.P. Winton motors. Speed 12 miles cruising. Cruising radius 10,000 miles.



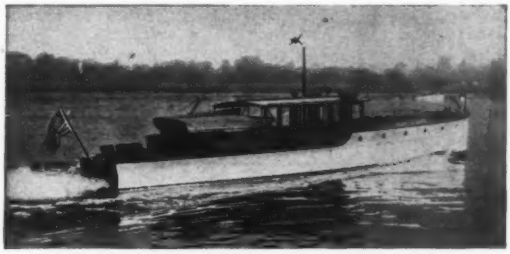
No. 3121—68-ft. twin-screw express cruiser. Hull double planked mahogany. Fittings and furnishings of the very best. Two double staterooms, dining and living room. Cockpit in bow. Two 300 h.p. Sterling motors. Speed 24 miles. One of the best express cruisers available.



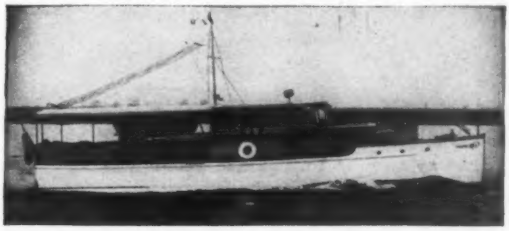
No. 4765—Sale or charter. 67 ft. twin screw diesel powered houseboat. Three double and one single staterooms. Two toilets, bath, etc. Roomy deckhouse containing pilot-house, dining and living room. Two 75 H.P. diesel motors. Speed 12-13 miles. Electric plant, hot water heat, Lux fire system, etc.



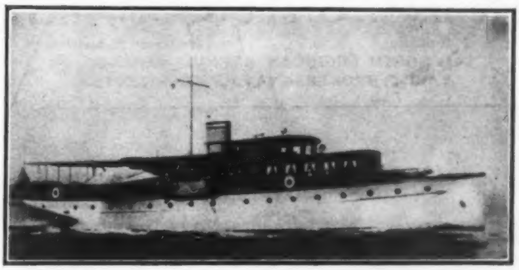
No. 3242—32-ft. Banfield Sea Skiff. New 1929. Two upper and two lower berths in cabin. Galley and toilet room. Large roomy after cockpit and cockpit in bow. 200 H.P. Kermath motor. Speed 28-30 miles. Fully equipped. H. H. JENNINGS COMPANY, 60 E. 42nd St., New York City.



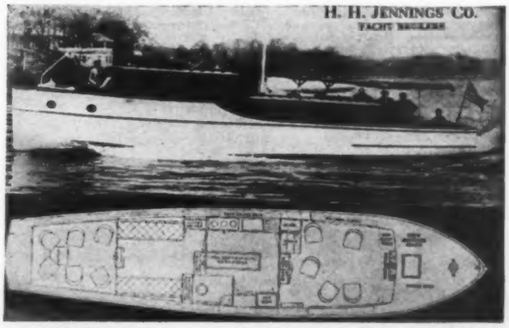
No. 3172—Twin-screw 65-foot express commuter. Owner's cabin with two berths and toilet room, and galley aft. Crew's quarters and galley forward. Roomy bridge deck, semi-enclosed. Speed 28-30 miles. Attractive buy.



No. 3421—54-ft. twin-screw A. C. F. cruiser. Two 175 H.P. Hall Scott motors. Two double staterooms. Berth in dining saloon. Roomy enclosed bridge deck. Toilet and shower. Speed 19-20 miles. Splendid proposition. Like new.



No. 3110—85-ft. twin screw power yacht. Two double and two single staterooms. Two bath rooms. Large deckhouse containing dining saloon, pilot-house, and living room. Two 100 H.P. motors. Speed 12-14 miles. 110 volt Universal generator. Hot water heat. Splendid cruising yacht. Beautiful condition.



No. 3379—47' A. C. F. Cruiser. Two folding Pullman berths in forward cabin. Two upper and two lower berths in after cabin, also lavatory installed in closet. Galley, toilet room. Berth and toilet for man forward. 100 H.P. Hall-Scott motor, reduction gear, speed 13-14 miles. Electric lights, etc. Price attractive. H. H. JENNINGS COMPANY, 60 East 42nd Street, New York City.

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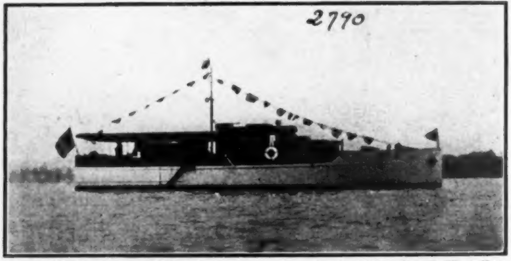
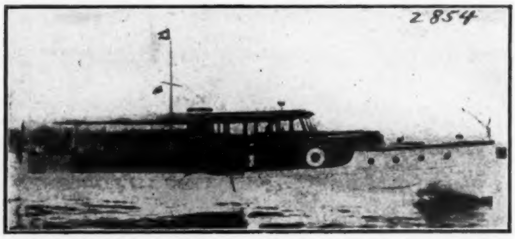
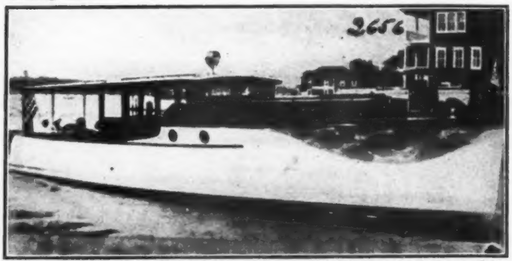


No. 2790—For Sale—68' twin screw cruiser built 1928. Speed 17 miles, 3 comfortable staterooms, 2 berths in salon, bathroom, etc. Has had excellent care and is offered at a very interesting price.

No. 2827—For Sale (might charter for season)—Modern 104' twin-screw cruising house-yacht. Speed 15-16 miles, 5 large staterooms. Deck dining and living room, 3 bathrooms, etc. Luxuriously furnished and a perfect floating home.



No. 2854—For Sale—Attractive 56' twin-screw cruiser, speed 15 miles. 2 double staterooms, 2 berths in dining saion. Bathroom and 3 toilets, 2 berths for crew. Most desirable. H. W. Sanfrod. 501 5th Ave., New York City.



No. 2656—For Sale—Beautifully constructed 1929 day boat or cruiser, sleeping 4 persons. Speed 15-18 miles. Very roomy and able, with a delightfully large cockpit. Has galley, toilet, etc., and is a very smart looking craft.

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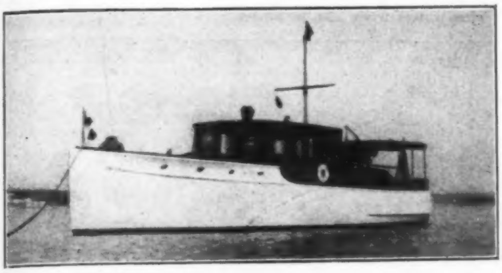

NO. 793—Beautiful Lawley 50′ Double Cabin Cruiser, built 1928 in the best manner. Has two Sterling engines, giving speed of 18 to 20 mi. Luxurious accommodations. Condition perfect. Fully in commission.

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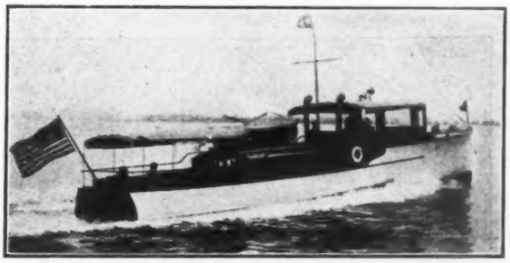

NO. 545—Luders built 58′ Twin Screw double cabin cruiser. Controls on bridge, large after cockpit. An unusually distinctive craft throughout.

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38′ Banfield Sea Skiff, 1927, two 140 HP each Scripps; speed 18-25, crew's quarters fwd. Completely equipped and fine condition. A real bargain.

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68′9″ x 15′6″ x 6′6″ Aux. C.B. Schooner, 80 HP Buda (1929). Guaranteed to be absolutely sound. Will stand any weather and go anywhere; beautiful lines; must be seen to be appreciated.

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72′ x 14′6″ x 9′9″ Aux. Keel Yawl, 25 HP Kermath. Fast, able and easy to handle with small crew. Fitted in best manner. In excellent condition.

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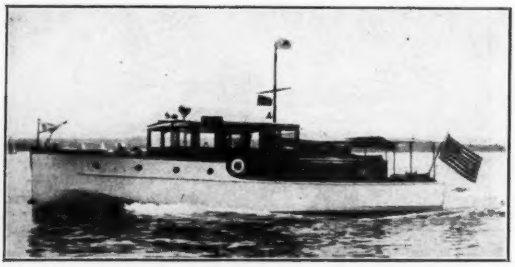
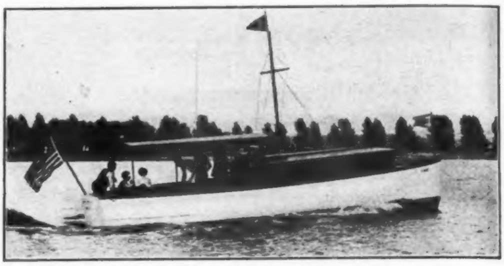
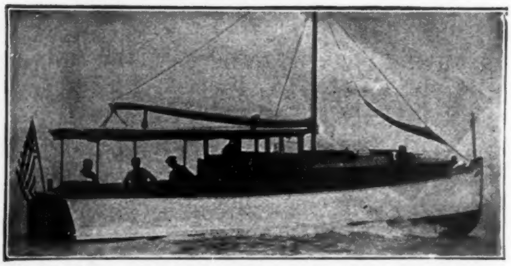


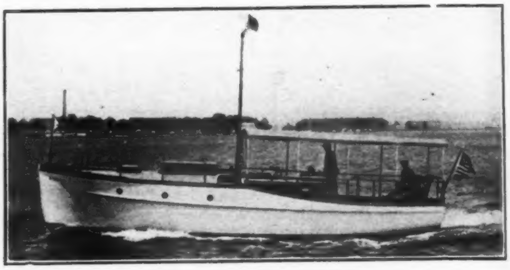
No. 114 Dawn 45 ft. Enclosed deck house. Lux fire-fighting system. Sleeping accommodations for six and one in crew. Homelite generating set. Shipmate gas stove. Two 70-100 H.P. Lathrop motors. Immediate delivery.



No. 125. Elco Cruisette, new 1928. This boat is in excellent condition, completely equipped.



No. 126. Two Standard Matthews 38s. 1926 and 1928 models. These boats are in excellent condition.



No. 128 Kyle 38, 65 H.P. 6 cylinder Kermath motor, dinghy and davit. Boat in splendid condition. In commission.

These boats must be seen to be appreciated. Our plant and Service yard, located right in New York City, is easy and convenient to reach. Come and inspect them in person.

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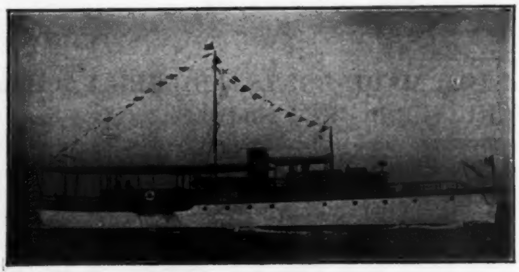
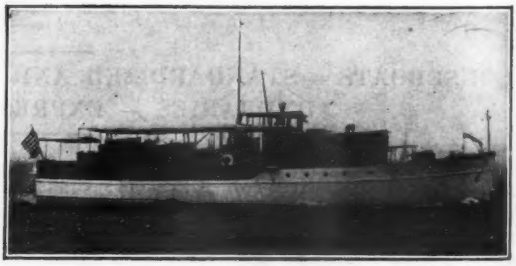
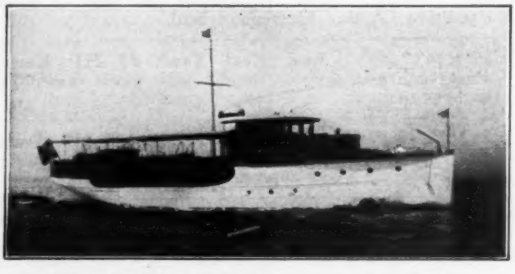


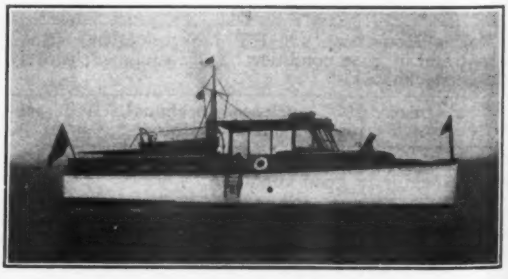
NO. 1002—Eighty-five-foot, twin screw cruiser of Gielow design, powered with two new six-cylinder 6½" x 8½" Twentieth Century engines. Owner's accommodations consist of two double and one single staterooms and bathroom. Large dining saloon in deck house. Special value. Terms.



NO. 1012—Cruising Yacht, 75' x 15'. Equipped with two 6-cyl. 100 H.P. 20th Century Motors. Layout consists of two double and two single staterooms, two bathrooms and deck dining saloon. Can be seen at any time.



NO. 1008—SUNSHINE II—80' x 14' x 4'. In commmission. Can be delivered immediately. Practically new. Owner building larger yacht. Send for details.



NO. 1011—High Speed Commuter. 47' x 10' 6" x 2' 9". 25 to 30 miles per hour. Two years old. Perfect condition.

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VEEDETTE 31 o.a. run about 400 m. Mahogany pilot house. Military mast, Ovington china. Exquisitely equipped, makes abt. 16-m. Smart little seaworthy cruiser, including Tender with Outboard motor, $3,300. Address Captain, 24 South Aberdeen Place, Atlantic City, N. J.

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H. Wrightson Dawson
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FOR SALE: Toppan "Sea Dog"—Practically new, powered with **180 H.P. Sterling Petrel motor. A bargain. Address Box 240, MoToR** BoatinG.

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FOR SALE—New Banfield 32′ 1930 De Luxe Cruiser, 200 H.P. Petrel Sterling, Chrome plating throughout, with tender, mooring and other accessories complete, $7,000. Owner leaving for Europe. Box 251, care MoToR BoatinG.

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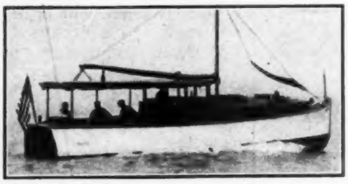

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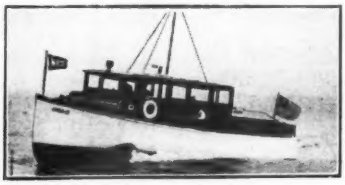

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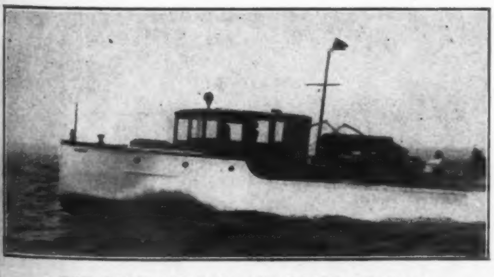

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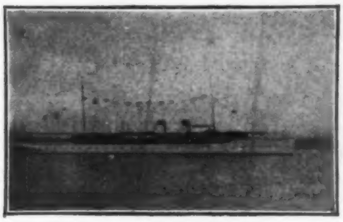

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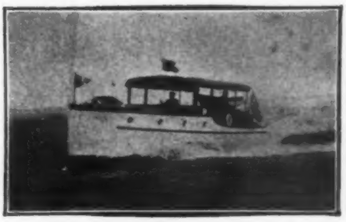

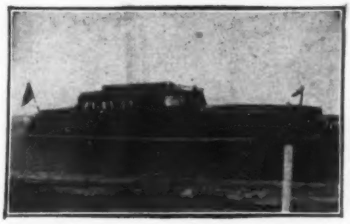

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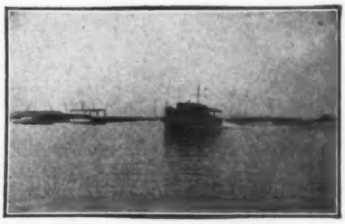

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